

THE INDEX REFERENCES APPLY TO FOLIOS AT FOOT OF PAGES.

TELEPHONE
1852
NUMBER



THE CHEMIST AND DRUGGIST

TELEGRAPHIC
ADDRESS
CHEMICUS LONDON

CHIEF OFFICE,
LONDON:
42 CANNON ST.
E.C.

ESTABLISHED IN

Branch Offices:
MELBOURNE,
SYDNEY,
and NEW YORK.

ENGLAND ... 1859. AUSTRALASIA ... 1885.

[Registered as a Newspaper.]

[Registered for Foreign Transmission.]

Prix de l'abonnement :—The Chemist and Druggist
une fois par semaine, et l'agenda du Chemist and
Druggist une fois par an, 12.50 francs par an,
franco.

Ahonnementspreis :—The Chemist and Druggist
einmal wöchentlich, und Notizkalender des Chemist
and Druggist einmal im Jahre, 10 Mark jährlich,
frei in's Haus geliefert.

Precio de suscripcion :—The Chemist and Druggist,
una vez por semana, y el Agenda del Chemist and
Druggist una vez al año, 12.50 pesetas anuales,
franco.

No. 495. Vol. XXXV.

OCTOBER 12, 1889.

{ Subscription, 10s. Per Annum, Including
Diary, Post Free the World over.
Single Copies, 4d. Each, Post Free.

ALLEN & HANBURY'S,

Manufacturers of Cod Liver Oil, Malt Extract, and Pharmaceutical Preparations,

Also of MEDICATED and other LOZENGES and IMPROVED JUJUBES,

WHOLESALE & EXPORT DRUGGISTS,

PLOUGH COURT, LOMBARD STREET, LONDON, E.C.

Works—Bethnal Green, E., and Longva and Kjerstad, Norway.

TELEGRAPHIC ADDRESS—"ALLENBURY'S LONDON."

VOICE TABLOIDS.

Composed of COCAINE, Chlorate of Potash, and Borax.

Impart a clear and silvery tone to the voice. Easily retained in the mouth while singing or speaking. Now used by the leading singers and public speakers throughout the world.

DIRECTIONS.—A single Tabloid may be slowly dissolved in the mouth to remove huskiness or hoarseness.

Supplied to the Trade in beautifully graven white metal boxes, blue silk label, at 8s. and 16s. per dozen. Retail prices, 1s. and 2s. per box. In oval bottles (vinaigrette style), at 8s 6d. per dozen. Retail price, 1s.

May be obtained of all Wholesale Houses.

BURROUGHS, WELLCOME & CO., Manufacturing Chemists, Snow Hill Buildings, E.C.

Chiswick Soft Soaps.

Packed in Tins, 1, 2, 3, 4, and 7 lbs. each; Casks, 14, 28, and 56 lbs.; or in 64 lbs. net; half ditto, 32 lbs., and Bulk, also packed in hermetically sealed Drums for Export, 28, 56, and 112 lbs. each, net.

SPECIALITIES—"IMPERIAL," the best for domestic use. "FINEST PALE" and "CROWN," specially made for scouring purposes, making Sheep Dip, &c. "CHISWICK POTASH SOAP," special for laundry use and cleaning fine woollen and silk goods. "CARBOLIC" (10 per cent. acid), for disinfecting purposes, stable and kennel use. "OLIVE," for wool washing. "HORTICULTURAL," for fly, mildew, &c. P. B. "SAPO MOLLIS," &c., &c.

The Chiswick Soap Company, Chiswick, London.

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(W. G. BAKER, R. C. HEATH, T. TYRER, W. E. B. BLENKINSOP),

Manufacturing Chemists,
BATTERSEA, LONDON, S.W.

MEDALS, 1851, 1855, 1862, 1867, 1885, 1887, 1888.

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PURE MINERAL ACIDS.

BENZOIC ACID AND ALL BENZOATES.

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For ANÆSTHETICS, PHOTOGRAPHY, and ICE MAKING

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SOLUTION OF AMMONIO-CITRATE OF BISMUTH, P.B.

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PURE CALOMEL,

AND EVERY MERCURIAL PREPARATION.

CONCENTRATED FRUIT ESSENCES AND FLAVOURS,

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The New Hypnotic.

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CHEMICAL
SOCIETY
&c.&c.

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SOLUBLE ESSENCE
OF
**JAMAICA
GINGER**

A PERFECT
GINGER ESSENCE
See The Lancet, July 3rd 1886

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**FRUIT
ESSENCES**

HARMLESS
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COLOURS
FREE FROM ANILINES

SOLUBLE
CONCENTRATED
COLOURINGS
FOR ALL LIQUIDS.

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RECTIFIERS & STILLERS,
BREWERS, &c.

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GUARANTEED PURITY
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SOLUBLE ESSENCES

FRUIT-ESSENCES

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OIL of LEMON
GUARANTEED
ABSOLUTELY PURE

SOLUBLE ESSENCE
OF
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SWEET ORANGE,
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TANGERINE
FRUIT
CHAMPAGNES.
&c. &c.

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FOAM SYRUP,**
FOR GIVING A CLOSE
CREAMY HEAD TO
ALL BEVERAGES

ALL MATERIALS
REQUIRED BY
CONFECTIONERS
BISCUIT MAKERS
WHOLESALE
TOBACCONISTS.
SOAP MAKERS,
PERFUMERS,
&c. &c.

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OF EVERY DESCRIPTION
ANALYTICAL AND CONSULTING CHEMISTS

STANDARD WORKS,
95A SOUTHWARK ST., LONDON. S.E.
AND 128, HOPE ST., GLASGOW.

Jockey Club.

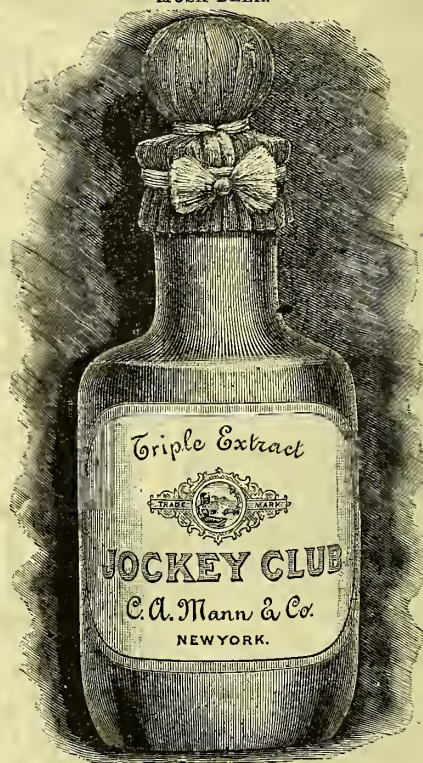
SOME people say they do not like musk. Maybe they don't like the rank, raw stuff, but when it is sweetened with the flower extracts, nothing is more delightful. Such is Jockey Club, an odour of the Musk order, that has held its own for generations, and is more popular to-day than ever. Of course there is a difference of opinion about this one and that one, but if the odour is well compounded from materials of the right strength, there can be but one verdict, as it gives universal satisfaction.

It is an odour that is at once refreshing, sweet, and flowery. A good Jockey Club combines some of the peculiar characteristics of Eau de Cologne with the fullness and sweetness of an extract, which softens and lingers, fulfilling one's notion of an ideal Perfume. There are some twelve or fifteen varieties of well-known odours which are also very pleasing, and which, if well made, possess their own peculiar and fascinating characteristics.

Perfumes for the market, to retain their freshness and sweetness of quality unimpaired, should be well stoppered in full bottles. Some odours will even improve with age. We notice a tendency of late to using quantities of Citron Oils in lieu of Flower Oils, to give body to Perfumes. This is objectionable for many reasons. They do not give to the Perfume the flowery sweetness so much admired, while they change, sour, and become rancid in a month or two of summer. Some of the well-known odours which we put out, are



MUSK DEER.



Fac-simile of the one-ounce bottle.

White Rose
Jockey Club
Lily of the Valley
Ylang Ylang
White Lilac

Stephanotis
Violet
Heliotrope
Wild Lotus
Frangipanni

Sweet Briar
Carnation Pink
Prairie Flower
New Mown Hay
Blue Bells

PUT UP IN GLASS-STOPPERED BOTTLES, AS FOLLOWS:—

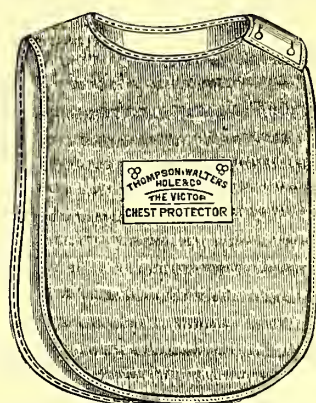
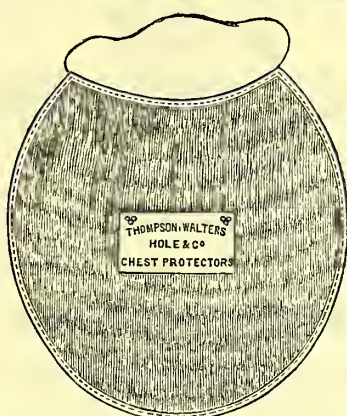
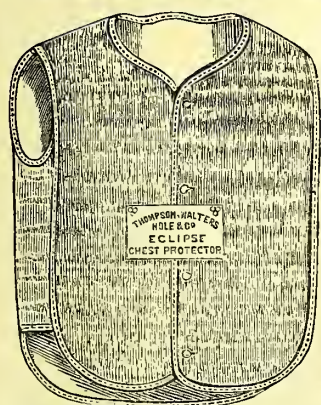
$\frac{1}{2}$ Ounce Size	per gross	\$24.00	2 Ounce Size	per gross	\$96.00
$\frac{3}{4}$ "	"	36.00	4 "	"	144.00
1 "	"	48.00	8 "	"	288.00
$1\frac{1}{2}$ "	"	72.00	1 lb. (18 Fluid Ounces)...	per dozen	48.00

ONE DOZEN IN BOX, EITHER IN SINGLE OR ASSORTED ODOURS, AS REQUIRED.

Additional information and Illustrated Catalogue furnished upon application.

C. A. MANN & CO., 48 Murray Street, NEW YORK, U.S.A.

CUT PRICES FOR CHEST PROTECTORS.



The Special Attention of the Trade is invited to our terms for CHEST PROTECTORS, which by manufacturing ourselves we are enabled to offer at exceptionally low prices.

IN COMPARING WITH OTHER LISTS PLEASE NOTE
OUR SECOND QUALITY CORRESPONDS TO THE FIRST QUALITY
USUALLY OFFERED TO THE TRADE;

And in order that Chemists may judge for themselves on this point we will, on receipt of business card, forward a sample to any address, PAYING COST OF POSTAGE OURSELVES, and we shall not charge for the sample if an order of not less than £2 is ultimately placed with us.

FELT, SCARLET, OR WHITE.

		No. 1	2	3	4	5	6	
OUR Second Quality, per dozen	...	6/3	7/8	9/	11/6	15/	20/	SINGLE.
OUR " " "	...	14/	18/	22/	26/6	35/	44/	DOUBLE.
OUR First Quality, per dozen	...	7/4	9/3	10/9	13/6	19/6	26/	SINGLE.
" " "	...	16/6	21/6	26/6	32/	43/	53/	DOUBLE.

Sizes of above—No. 1, 9½ in. by 7¾ in.; No. 2, 10¾ in. by 9 in.; No. 3, 12½ in. by 6 in.; No. 4, 14½ in. by 11½ in.; No. 5, 16½ in. by 13½ in.; No. 6, 17½ in. by 14¾ in.

"ECLIPSE" New Waistcoat Shape (see above) of Felt, with arm-holes and side-pieces, effectually preventing any movement of the Chest Protector when in use.

Per dozen ... No. 1, 17/6; No. 2, 23/6; No. 3, 31/6; No. 4, 39/; No. 5, 48/; No. 6, 56/

SPECIAL DISCOUNTS.

ALL THE ABOVE QUOTATIONS ARE SUBJECT TO THE FOLLOWING DISCOUNTS:

5	per cent. on all Orders under £5 in value.
7½	" " " " £5 and upwards.
10	" " " " £10 "
12½	" " " " £15 "
15	" " " " £20 "
17½	" " " " £25 "

N.B.—We also present with all Orders of £5 and upwards a HANDSOME WOODEN SHOW CASE WITH GLASS TOP LID TO LIFT OFF, which is equal in value to another 5 per cent. discount.

THOMPSON, WALTERS, HOLE & CO., LIMITED,
CURTAIN ROAD, LONDON, E.C.

THE
BEST, LARGEST, CHEAPEST

And by far the most



Superior Style in the Trade.

Full Sample of each Post Free for 2s. 6d.

PRICES.

£1 Assorted Orders, Carriage Paid.

Accounts amounting to £50 during the year, a Bonus (in goods at List Prices) to the value of £2 10s. (equal to 5 per cent.) will be given. Accounts of £100, a Bonus (in goods as above), to the value of £7 10s. (equal to 7½ per cent.) will be given.

TERMS—NETT, CASH WITH ORDER.

1d. POWDER, Square Packets, per gross	4/6	1/0 POWDER, Round Boxes, per gross	72/0
2d. " " " "	8/6	6d. LUMP, Square Boxes ... "	36/0
3d. " Round Boxes "	18/0	1/0 " " " " "	72/0
6d. " " " "	36/0	POWDER, in Bulk ... " " "	per cwt. 12/6

*WHOLESALE TERMS ON APPLICATION,
which will be found, on comparison, not to be equalled.*

The subjoined are two out of many unsolicited testimonials—

MR. HARTLEY, Chemist, Westbourne Square, W., writes:—"I don't know any Fuller's Earth on the market so attractively got up."

MESSRS. FULLER & CO., Chemists, Norwich, say:—"We received your samples, and are very pleased with them; please send enclosed order."

LEWIS VIGIS, BATH.

WHOLESALE AGENTS—

BAISS BROS. & CO., 4 JEWRY STREET, E.C.; BARCLAY & SONS, LIMITED, 95 FARRINGDON STREET, E.C.

S. MAW, SON & THOMPSON'S

CHEST PROTECTORS AND VESTS

For Shielding the Lungs.



FIG. 3.
Double, for the Chest and Back.

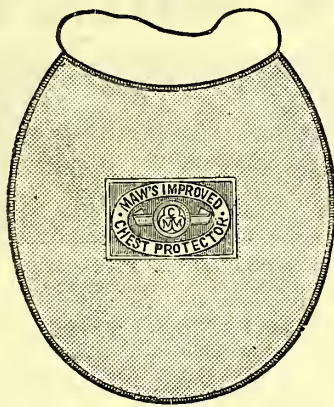


FIG. 4.
Single, Chest Protector.



FIG. 5.
Vest, a Shield for the Lungs.

CHAMOIS AND FLANNEL.

					No. 1	No. 2	No. 3	No. 4
Fig. 3.	Double	...	...	per doz.	20/	26/	32/	39/
	Ditto, perforated...	...	...	"	24/	32/	38/	46/
Fig. 4.	Single...	...	...	"	9/	11/6	13/6	16/
	Ditto, perforated...	...	...	"	11/	14/	16/	19/
Fig. 5.	Vests	"	...	"	27/	34/	42/	51/

FELT, ASSORTED SCARLET AND WHITE.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double, best...	...	per doz.		17/	22/	27/	33/	44/
	Ditto, second	...	"		14/6	19/	23/	28/	37/
Fig. 4.	Single, best ...	...	"		7/6	9/6	11/	14/	20/
	Ditto, second	...	"		6/6	8/	9/6	12/	16/
Fig. 5.	Vests, Scarlet	...	"		17/	22/	27/	33/	40/

FELT, NATURAL UNDYED WOOL.

					No. 1	No. 2	No. 3	No. 4	No. 5
Fig. 3.	Double	...	per doz.		18/	24/	30/	36/	50/
Fig. 4.	Single...	...	"		8/	10/	12/	16/	22/

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

S. MAW, SON & THOMPSON, LONDON.

DAVIS'S TOILET ALMANAC, 1890.

TWENTY-FIRST YEAR OF PUBLICATION. ENTERED AT STATIONERS' HALL.
NOW READY. SEND FOR SAMPLES.

No Charge for Memoranda Pages.

List of Proprietary Articles with prices inserted if required.

Contains more pages of matter relative to Chemists' business than any other Almanac.

THE BEST AND
CHEAPEST
POCKET ALMANAC
IN THE MARKET.

The Chemist and Druggist, September 28th, says:—
"Mr. John Davis, 201 Old Kent Road, is ready with a specimen of his Toilet Almanac for 1890, got up in the usual attractive style, and containing useful toilet hints calculated to promote business. A sign of the times is the offer of several alternate pages, on which leading specialities are quoted at 'cut' rates."

JOHN DAVIS & CO., LIM., PRINTERS, OLD KENT ROAD, S.E.

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MEDALS.

(GESTETNER'S PATENTS.)

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Invaluable to Chemists for Printing Counter Bills, &c. Prices from 25s. to 42s. complete.

Mr. A. W. SMITH, Chemist, Pershore, wrote, August 23, 1889:—"I have found your 'Cyclostyle' invaluable. It has saved me many hours' labour, and not a little expense."

Apply for Specimens of Work and Descriptive List to

THE CYCLOSTYLE CO., 79a Gracechurch Street, LONDON, E.C.

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WHOLESALE & RETAIL
Druggists' Price Book
By D. ELLIOTT.
NEW EDITION, revised according to the British Pharmacopoeia, — 1885. —
Pocket Size. Bound in Leather. Price 3/, Post Free 3½/.

—X— LABELS OF EVERY DESCRIPTION. —X—

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1890,

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Seven Designs PRESENTATION, CARD, AND HANGING
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CLERKS' GUIDE
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Chemists' Counter Bills, good quality, 7½ by 5 ... 10,000, 15/
Chemists' Counter Bills, good quality, 9 by 5½ ... 10,000, 22/6
Chemists' Slip Labels from 1/ per 1000;
a reduction on large quantities.

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SAMPLES FREE
BY
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POST.

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Medical Label and General
Printer,
92, BLACKFRIARS ROAD, LONDON. S.E.

ANALYTICAL
EXERCISE FORMS,
FOR
Chemical Students.
Arranged by
H. BELCHER THORNTON, F.C.S.
Price 6d. per doz. forms.

—X— ILLUSTRATED TRADE CATALOGUES, &c. —X—

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SOLIDS AND SOLUTIONS.
Specially intended for Beginners,
by
H. BELCHER THORNTON, F.C.S.
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Post Free.

IVORY-LIKE SHOW-CARDS.

We are just bringing out what some of cultured taste have assured us is the most tasty and artistic Show-Card ever placed in a Chemist's hands. It presents the appearance of the finest ivory, is bordered with an exquisite design, and bears upon its face unique lettering in gold. It is not so large but that it will go into a show-case, and not so small but that it will be becoming to a Chemist's window. It is not bedizened with colours, and is sure to elicit the admiration and attention of all. We shall send some of these Show-Cards to all Chemists who have communicated with us during the last three months, and to all those who will write us at once that they have stocked "Vinolia," and would like them. We further notify all Chemists that we are prepared to send a supply of our new 32-page Pamphlets on "Vinolia" to them on application, also some of our 16-page Pamphlets on the "Hygiene of the Skin and Hair," also a 4-page Circular on "Vinolia" preparations and little leaflets. Chemists from all parts of the country have written us, thanking us for the satisfactory results accruing to them from co-operating with us. We can say truthfully that we find it in our power to increase the business of any Chemist. We now offer a liberal discount to the trade, and Chemists should have no difficulty in making a good profit on our products.

BE NOT DECEIVED.

Our imitators are getting as thick as blackbirds—and blackberries. From all parts of the country some literature reaches us bearing evidence of this. The results of their efforts are in no sense to be compared with their very marked appreciation of our productions. We would say to that species of Chemist that they would find it far more to their credit and pecuniary profit to co-operate with us than whittle away their time trying to make commonplace imitations. The claims advanced by all this ilk are, so far as we have been able to ascertain after careful investigation, completely without foundation, and the general inference is that they are drawn up on the lines of our advertisements, in which we state the exact properties of the "Vinolia" products—no more and no less. "Vinolia" will relieve itching. How many of the imitations of it will do this? Not one that we have seen. "Vinolia" Soap is superfatted. It contains a "di'acid soap molecule." Now the imitators of it claim to counteract the stimulating irritant action of the alkalies in their products by the addition to them of extra fat. One would think the thing for them to do would be to leave out the stimulating, irritating, harsh terebinthinates, and after that try to make their soap neutral. We say to our patrons: Be not deceived by the cunningly contrived advertisements of those who would "steal our thunder" and divert our trade with appeals to false economy.

TERMS TO CHEMISTS.

"VINOLIA" SOAP (Medical), under 1 doz., 20/; 1 doz. and upwards, 18/4.	"VINOLIA" (Small Size, Stamped), under 1 doz., 18/; 1 doz. and upwards, 16/9.
"VINOLIA" SOAP (Toilet), under 1 doz., 24/; 1 doz. and upwards, 22/10.	"VINOLIA" (Large Size, Stamped), under 1 doz., 60/; 1 doz. and upwards, 57/8.

In the Unstamped the due amount is taken off.

Agents for BLONDEAU & CIE.:

ROBERTS & CO., 76 NEW BOND STREET, LONDON, W.

EXCHANGE COLUMN.

This section of "The Chemist and Druggist" must be closed for press by Thursday noon of each week. Remittances payable to EDWARD HALSE.

TERMS

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us, accompanied by a commission of 6d. if the amount is £3 or under; and 1s. if over that sum. We acknowledge receipt of deposit to both parties, and hold the money until we are satisfied that either the goods are returned to their original owner or the purchase is completed.

Postal orders and cheques sent as deposit must be made payable to Edward Halse, and crossed "Martin & Co."

FOR DISPOSAL

Formulae.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Proprietary Articles.

Thres dozen Swift's specific. Mickle, Chemist, Liverpool.
Patents, good condition, exchange anything useful; card for list. Kent, Westminster Road, London.

Educational.

What offer? Bentley's "Botany," Fowne's "Organic and Inorganic Chemistry," Wills' "Materia Medica," Ganot's "Elementary Physics," latest editions and quite new. Drinkwater, Chemist, Patricroft, Manchester.

Drugs and Chemicals.

Puly. opii, 12s. lb., post free. 107/27.
34 doz. Sequah's medicines; soiled patents; send for list; what offers? 107/22.
Sulphur and cream of tartar lozenges, 4 lbs. post free for 4s. 6d. Davidson & Gray, Dundee.
Poppy-heads, this year's, good sample, 500 4s. 9d. 1,000 9s., 2,000 17s. 6d., 5,000 40s.; send post-card for free sample; any quantity forwarded. Elliott, Chemist, Bedford.

Shop Fittings.

18 1-gallon black store bottles, gold labelled, 20s.; 19 1-gall. ditto, 14s. W. Hawke & Son, Wild Court, W.C.
Four handsome pear-shape carboys, 2 ft. 3 in. high, without stopper, circumference 4 ft. 8 in., beautiful spiral cut stopper, 10½ in.; also round mahogany blocks and 2 iron standards, each one to carry 2 carboys; lowest price 95s. Lyon, 83 Christchurch Street, Ipswich.
Glass bottles, job lines.—About 50 gross 3-oz. pale green pomades for corks, 4s. 6d. per gross; 4 gross 6-oz. screw nickel-capped pomades, 16s.; 1 gross 16-oz. ditto, 30s.; 3 gross 1-pint (reputed) green syrups, 7s.; 4 gross 1-pint ditto, 10s.; 2 gross 1-pint ditto, 15s.; 5 gross 1-pint white syrups, 12s.; 3 gross 1-pint ditto, 20s.; 1 gross 6-drachm lavender, 5s.; 3 gross 2-oz. white globe-necked panels, 7s. Hearn, 381 Kingsland Road, London.

Second-hand counter 13 ft. by 2 ft., 19 useful drawers, mahogany top, &c., 5l.; also entire fitting of shop, consisting of drawers, shelving, cornicing, wall and counter show-cases, dispensing screen, sponge case, window enclosure, carboys, desk and case, shop rounds, specie jars, ointment jars, &c., to be sold—a bargain; also the stock of fancy sundries. Natali & Co., 184 Aldersgate Street, E.C., nearly opposite Maw's. Established 1863.

Price 48 guineas to clear at once.—The entire fittings of a large double-fronted chemist's shop, 2 nests of mahogany-fronted drawers with lockers under, 10 ft. 6 in. long each 2 ditto, 4 ft. long each, 2 mahogany top counters, 2 desks with glass cases in front, 6 ft. bent glass counter cases, 2 other counter cases, 250 shop rounds, syrups, &c., quantity blue ointment jars, 5 carboys and stands, 2 glass window enclosures and frames, scent bottles, jujube jars, 2 pestles and mortars, shop dial, stock pots, outside lamp, shelving, cornice, a lot of drugs and sundries. Can be seen Monday, October 14, and 2 following days, at Philip Joseph's, 54 Old Street, Goswell Road, London, E.C.

Second-hand.—One specie jar, 31 in. total height, ornamental scroll label and ornamental glass cover, 1l. 15s.; two specie jars, 23 in. total height, royal arms, with japanned cover and mahogany plinth, 4l.; 1 ditto, 30 in. total height, glass gilt cover, royal arms, 2l. 17s. 6d.; 1 ditto, 30 in. total height, specie, 2l. 8s.; 1 16-gallon carboy, cut stopper, 1l. 16s.; 1 12-gallon cylinder carboy, 1l. 5s.; 11 in. marble mortar and pestle, 10s.; 1 quart tincture press, 7s. 6d.; 1 1-gallon ditto, 1l. 7s.; 1 6-gallon carboy and stand, 14s.; counter, 6 ft. 8½ in. long by 2 ft. 5½ in., Spanish mahogany front, trusses and moulded edge, 5l.; counter 11 ft. 10½ in. long by 2 ft. 3 in., mahogany front, trusses and pilasters, 5l. 10s. W. Hawke & Son, Shop Fitters, Wild Court, Great Wild Street, W.C.

Miscellaneous.

For sale, cheap, or exchange, quantity smelling-bottles and merbol cones. Particulars, Fiske, Beach, Weston-super-Mare.

Five 200-gallon galvanised-iron petroleum-tanks, and 2 100-gallon ditto, all in good condition, with brass taps. J. F. Harston, Chemist, Lincoln.

One brass enema apparatus as Maw's fig. 7, second hand, six connections; one new ½ pint Equisier's Irrigator, fig. 18, cheap. Lawrence, Chemist, Peel, Man.

Earthenware unions for feeding bottles, 1s. 4d. per gross, carriage paid; wholesale, in quantities, 1s. per gross, 1 per cent. discount. H. Greatbatch, 16 Newcastle Road, Hanley, Staffordshire.

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Scarlet felt chest protectors, sizes 1, 3, and 4; wedgwood funnels, size No. 10; 21-pint iron mortars and pestles; iron enamelled evaporating pans; all above new; 30 per cent off list prices; electric bells on mahogany stands, with six yards of wire, battery and push; portable and easily fixed; complete, 10s. 6d. Botham, Higher Broughton, Manchester.

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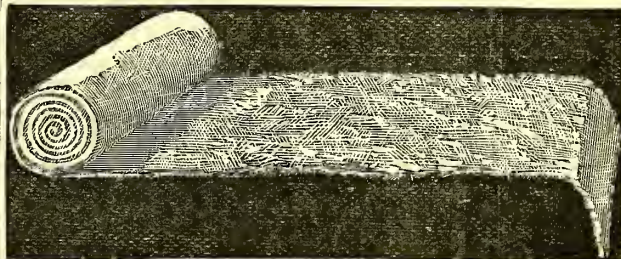
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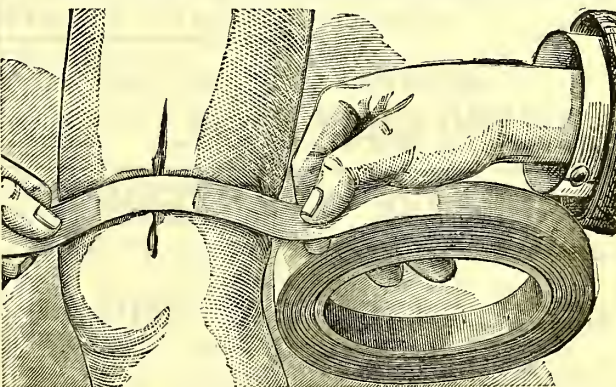
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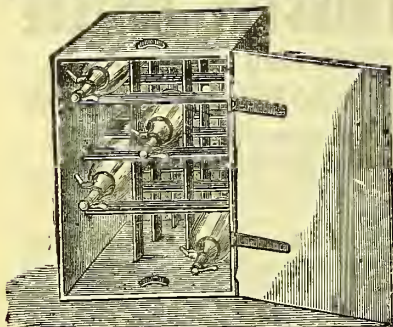
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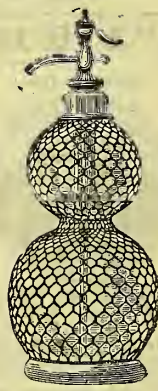
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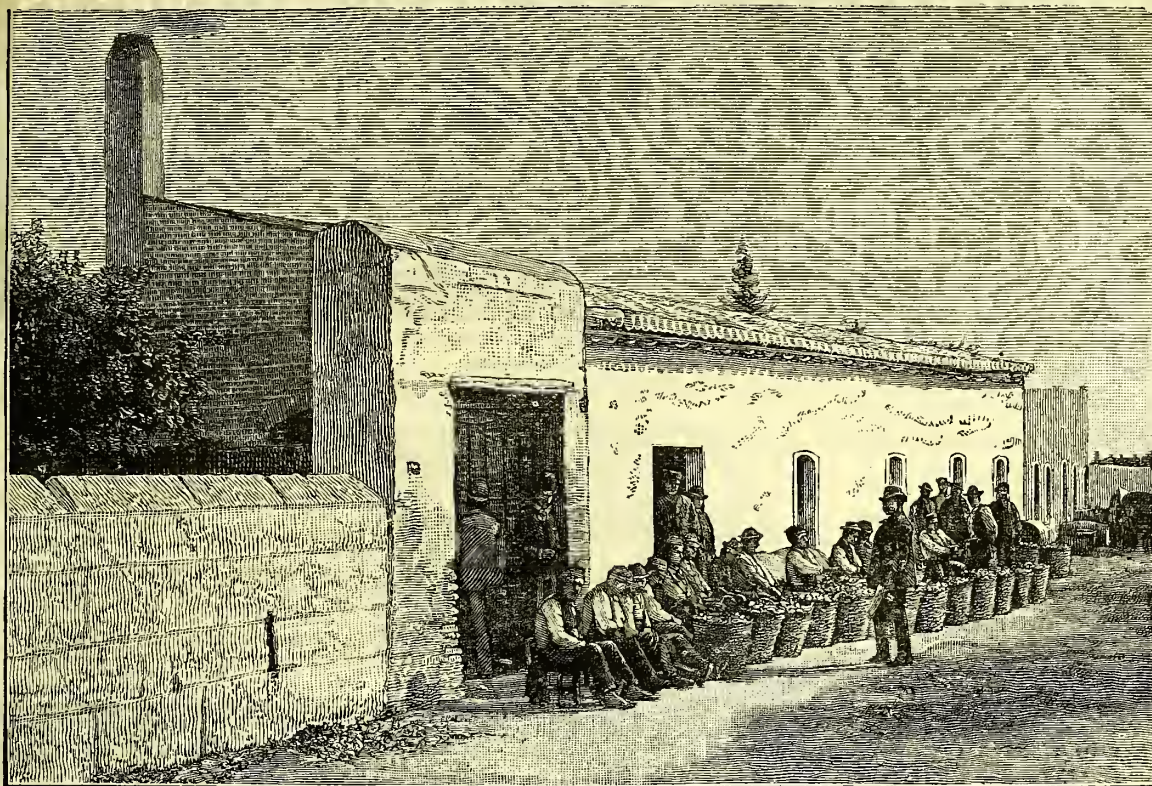
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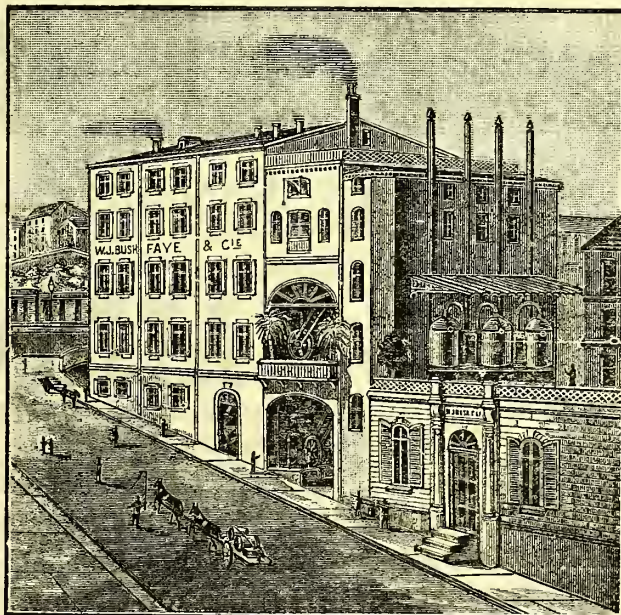
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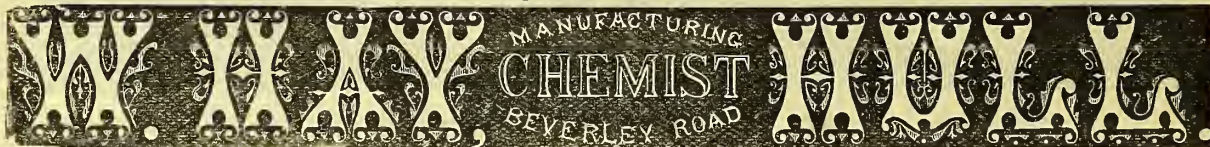
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Gentlemen prepared to invest about £3,000 are invited to apply to Messrs. Orridge & Co., regarding several Country Businesses, Wholesale and Retail combined.

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LANCASHIRE.—Returns £800; rent low; General Mixed Retail Prescribing, &c.; price £350.

LONDON.—Good-class Retail and Surgeon's Wholesale; returns £3,000; price about £2,000.

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Stock and Fixtures, nearly new, together or separately as desired; well worth the attention of parties refitting.

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FOR immediate disposal (owner going abroad); established 20 years; in present hands 10 years; good bargain; unopposed; all cash trade, no booking. Particulars, Watson, Chemist, Blythe Road, Addison Road Station, between 10 and 12 a.m. and 6 and 9 p.m.

CHEMIST'S Business, in a good neighbourhood, Midlands; well stocked; take £200 for whole; rent £30; business doubled last six months; capable of extension. Apply, W. Davis, Colonial House, Malvern Link.

LONDON, N.E.—A small Ready-money Business, in a busy thoroughfare; in the present proprietor's hands 27 years (retiring); small convenient house; amount required £150. Apply to "Dentist," 49 Newgate Street, E.C.

A SMALL Business in a busy thoroughfare, in the hands of the present proprietor 35 years (retiring), to be sold at a valuation; shop well fitted; gas in each room; house convenient; rent £24. Apply 23 Charlotte Street, Landport.

DUBLIN.—A high-class Business (Pharmacy and General) to be disposed of as a going concern in the best part of Dublin; about £3,000 capital required. Apply, "Pharmacy," care of Barron, Harveys & Co., 5 Giltspur Street, London, E.C.

CHEMISTS.—An opportunity offers to any gentleman with the necessary means, to purchase, on advantageous terms, an old-established Business and special preparations; terms on personal application. Address, Y. Z., Miss Atkinson, 40A King William Street, London, E.C.

NEAR Tunbridge Wells.—Excellent position in one of the prettiest and healthiest parts of Kent; a good Prescribing and Dispensing Business; plate-glass front; modern fixtures; large house and garden; proprietor taking larger concern. Particulars of A. C. Farmer, Chemist, 108 London Road, Southborough.

£300.—**MONMOUTHSHIRE** Iron and Coal District; established 30 years; proprietor retiring; genuine Prescribing, Dispensing, and General Retail business; ready-money; full prices; shop large and convenient, nicely fitted and well stocked; rent £26. Apply, "Iron," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

NORFOLK.—For immediate Sale, an unopposed village Business, few miles of sea; returns £700; net profit £300; rent £30, on lease; light Retail trade, nothing heavy or mixed; same hands many years; price £500; handsome shop; large house and garden. "Aqua," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WALES.—Market town.—Business for disposal, doing a light Retail Dispensing and Prescribing Business; returns are £1,000 per annum; low rent; 12-roomed house, with bath-room; very handsomely-fitted shop, and heavily stocked; price only £600, or offer. For full particulars, apply to E. R. J., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BRISTOL.—For immediate disposal, a well-known Prescribing and Dispensing Business situate in a large neighbourhood; rent £32; 9 years' lease unexpired; commanding corner premises with stable attached; present tenant nearly 18 years; capital opportunity for one with knowledge of dentistry; capital required, about £400. Full particulars of Edward T. Parker, 39 Broad Street, Bristol.

FOR Sale by private treaty, an old-established Chemist and Druggist's Business in good provincial town, close to Manchester Ship Canal; good house and warehouse adjoining; rent £35; 5 or 7 years' lease could be arranged for; stock, fixtures, &c., £200; good opening for energetic and duly qualified chemist. Further particulars can be obtained from Mr. Chas. W. Nasmitth, Chartered Accountant, 69 Princess Street, Manchester.

SYDNEY GREENWOOD, A.I.A.

Assessor of Fire Claims with the Insurance Offices,

Licensed Valuer to the Drug and Allied Trades, Chemists' Transfer Agent and Accountant,

PITTVILLE HOUSE, Lea Bridge Rd., CLAPTON, N.E.,

Begs to inform the Trade generally that he has for many years been associated with the Transfers of Chemist's and Druggist's businesses, also with Valuations for Probate, Stocktaking, and Transfer, and that he still continues to carry on his business on the lines of that established in the year 1870, thus enabling him to settle with promptitude any business matter placed in his hands.

Having recently settled some of the largest Fire claims in the metropolis with the Fire offices, ranging up to £10,250, he is in a position to act for the assured after a fire has taken place, and in many cases effect a considerable saving, being well accustomed to the difficulties arising in making claims.

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STAFFORDSHIRE.—Returns £1,000; profitable Mixed, cash trade; rent £40; noble-looking house, well-fitted and stocked; price £750 (a bargain).

LINCOLNSHIRE.—Returns £500, formerly £900; rent £50; price £250. Another, returns £1,000; low rent; profitable Family trade; price £830.

N.B.—Numerous others on application to Mr. SYDNEY GREENWOOD, as above.

BUSINESSES FOR DISPOSAL—Continued.

LONDON, S.W.—A good Prescribing and Retail Drug and Botanical Business, with Dentistry; old-established; main road; returns £400; good house and shop, on lease; cash £150, a bargain; or house and shop, &c., can be let without stock, &c.; leaving London. Address, "Botanic," Walker & Troke, 82 City Road, London.

S.E.—TO BE DISPOSED OF, a small Genuine Chemist's Retail; owner, having situation, will accept value of stock and fixtures, or first reasonable offer; doing between £4 and £5 per week (has done £6; suit beginner, or good opening for medical man. Apply to "Chemicus," 39 Hardcastle Street, Peckham, S.E.

£50.—**WELL-FITTED,** fairly-stocked, going concern, or for removal; rent £26; 5 carboys and window fittings, 162 mahogany drawers, 6 mahogany glass cases (one with 8-day clock on top), 42 blue pots, 230 stoppered stock bottles, good counter, &c.; widow must realise; fair business formerly done; open to offer. D., 34 Mount Pleasant, Liverpool.

FOR SALE.—Cardiff, Wales.—A lucrative Chemist's Business in the most flourishing town in the United Kingdom, and the best position in same for General Counter trade, including Shipping, Agricultural, Dispensing, Prescribing, Patents, and an independent Proprietary Article Business of many years' standing; may be greatly extended; 12 years' lease on premises; £75 let off; cash required about £2,000; weekly cash returns £30. "Lyttae," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TO be disposed of, Dispensing, Prescribing, and good opening for Dentistry; unopposed in central Cornish town, surrounded by different kinds of works; mile from shipping place and two railway stations; the present proprietor, having held with the above the medical appointments of the district for nearly 30 years, has transferred them to a medical man now residing in the place; satisfactory reasons given for parting with it; splendid chance for energetic man seeking good concern capable of development; stock of drugs; convenient house and out-buildings. Apply, P., care of Baker, Stationer, St. Blazey, Cornwall.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

A GOOD Chemist's Business required in Yorkshire, or near to, doing not less £15 weekly. Reply, "C," care of Hirst, Brooke & Hirst, Leeds.

WANTED, good-class Retail with a fair amount of Dispensing; Midlands preferred, but any healthy part not objected to; cash ready to £750. "Principes," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, a neat Retail and Dispensing Business in suburbs of Manchester or within ten mile radius; must be capable of improvement. Address in confidence, "Chemist," Britannia Works, East Street, Lower Mosley Street, Manchester.

PARTNERSHIPS.

ADVERTISER wishes to find a steady young man to join him in a small business who has some means; if not passed Exam. no consequence. Address, "Chemicus," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

YORKSHIRE.—Shipping, Market; 17,000 inhabitants; Partner wanted to manage, live on premises; splendid opening for Chemist-Dentist; would sell outright if good offer. Also Assistant wanted, married, qualified or unqualified, to live on premises. "Yorkshireman," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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PECKHAM RYE, S.E.—Absolute Sale (owner going abroad).

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SALE BY AUCTION.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TAUNTON.

IMPORTANT TO CHEMISTS AND DRUGGISTS.

WM. J. VILLAR has received instructions from Mr. George White, the Trustee of the estate of Mr. J. C. Sargent, of No. 5 Fore Street, Taunton, Chemist, under a deed of assignment for the benefit of creditors, to submit to PUBLIC AUCTION at his sale room adjoining the General Post Office, Taunton, on Tuesday, October 15, 1889, at 3 o'clock in the afternoon precisely, in one lot, the whole of the STOCK IN TRADE, amounting at cost price, to £341 or thereabouts, together with the Shop Fittings (exclusive of fixtures) and the whole of the Recipes of Proprietary Articles, also the Prescription Books extending over a period of 39 years. The purchaser will be allowed, should he elect so to do, to take the book debts due to the estate, amounting to about £120, at a valuation to be made in the usual manner. An arrangement may be made with the holder of the lease, by which, upon payment of £50 or thereabouts, the purchaser may acquire the lease and fast fixtures with a view to continuing the business as a going concern. The stock may be viewed at any time before the sale, by appointment to be made previously with the Auctioneer, and a schedule can be inspected at his offices. Dated, 10 Hammet Street, Taunton, October 1, 1889.

FOR SALE.

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THE entire Fittings of a Chemist's Shop, £50, fixed; complete list and illustration on application. Elkannah Natali, 207 Old Street (near County Court), Shoreditch. Only address; no connection with any other house.

ENTIRE Stock and Fixtures of a Chemist's shop, also valuable Proprietary Articles: must be sold at once; no reasonable offer refused; cash required about £400. "Pilula," care of Messrs. Wyleys & Co., Coventry.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, Junior Assistant used to quick Retail; steady and obliging; aged about 20. Willis, Chemist, New Brompton.

WANTED, an Assistant; outdoors. Apply, giving full particulars, to D. P. Roberts, Drug and Chemical Store, North End, Croydon.

AN Assis'tant, in a light Retail and Dispensing business; aged about 23; one only kept. Apply, stating usual particulars, to F. Kirby, 114 Abington Street, Northampton.

WANTED immediately, an Assistant accustomed to a good-class Dispensing and Prescribing business; indoors; state age, and enclose photo. G. F. Huntley, The Square, Wimborne.

JUNIOR Dispenser wanted, in Private Surgery; about 20; must be quick and accurate; £1 weekly and lodging. Write, stating references, &c., to D. & P., 115 High Street, Croydon.

ASSISTANT with good knowledge of first-class mechanical Dentistry; progressive salary and comfortable berth; immediate. "Mids," Messrs. Maw, 12 Aldersgate Street, London, E.C.

AT once, qualified Assistant; aged about 22 years; indoors; salary given, £40; one accustomed to a country business preferred. Apply, with references, height, &c., to Allen & Neale, King's Lynn.

IMMEDIATELY, outdoor Assistant; must be a pushing salesman of good address; no Sunday duty; state full particulars, age, height, salary required, and references. Lewis, 87 Fishergate, Preston.

RESPECTABLE Youth wanted at once, in Sundries department, aged about 18. Write, stating age, previous experience, and wages required, to Thompson, Walters, Hole & Co., Limited, Curtain Road, E.C.

IMMEDIATE.—Assistant; qualified; indoors; hours 8 to 9; weekly half holiday; no Sunday duty; comfortable home. Apply, with full particulars, reference, salary, age, and height, to A. B. Frost, Beeston, Notts.

WANTED, immediately, a competent and trustworthy Assistant for a small country business; qualified and single; about 28 or 30 years old. Apply, with usual particulars and enclose photo, to Mrs. Hall, Kelvedon.

DRUG TRADE.—Man wanted, for wet or dry counter; must have a thorough knowledge of the Wholesale trade. Apply to Mr. McCorquodale, Messrs. Burgoyne, Burhidges, Cyriax & Farries, Wholesale Druggists, 16 Coleman Street, London, E.C.

WANTED, a Junior Assistant or Improver; one accustomed to a Mixed business preferred. Apply, with full particulars as to age, height, salary required (indoors), references, &c., enclose photo, to Robert M. Stewart, 47 Market Street, Ashby-de-la-Zouch.

WANTED about November 1, Assistant (outdoors), for a good-class business in the country (North); must be of good address, energetic and obliging; aged about 23. Apply, stating age, height, salary required, and references, to R., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WHOLESALE Druggists want a Junior Assistant; a thorough knowledge of the Drug trade and a good and quick handwriting indispensable; no others need apply. Apply, with testimonials, and mention age and salary required, to 254/452, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, at once, a thoroughly reliable Assistant (indoors); about 23; able to prescribe, extract teeth, and take charge when required; excellent opportunity for one requiring time for study. Apply, with full particulars and enclose photo (returnable), to "Senna," care of Messrs. Walker, Troke & Co., 82 City Road, E.C.

WANTED, a good Junior Assistant (outdoors); able to take charge in the temporary absence of the principal; accustomed to a light class trade; enclose photo, with the usual particulars, and state previous engagements; applications entertained replied to within 3 days. J. Griffiths Richards, High Street, Hastings.

IMMEDIATELY, an outdoor Assistant for a country mixed Drug and Grocery business; one capable of managing in the absence of proprietor, and with a view to succession, preferred; undeniable references required; non-smoker and abstainer essential. Apply, with full particulars, Mr. Elmitt, Chemist, Horncastle, Lincs.

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3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, an Apprentice, in good class Business. Particulars from G. Fisher, Chemist by Exam., 12 Market Street, Longton, Staffs.

JOHAN B. BROADBENT, Chemist, Honley, Yorks, is in want of an Apprentice who has passed Preliminary, or its equivalent; every opportunity for thoroughly learning the business.

APPRENTICE.—Wanted, well-educated youth; comfortable home; this is a first-class opportunity. Address, with full particulars, to "Omega," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

JUNIOR or Improver; aged 22; good references. X., 63 Leman Street, Aldgate, E.

AS Manager, or Temporary; good experience. A. P. S., 70 Lansdowne Road, Clapham, S.W.

AS Assistant (outdoors); 24; Dispensing business preferred. R., 2 Horton Road, Hackney.

JUNIOR; 5 years' experience; aged 23; good reference. "Chemist," Morfa Bach, Kidwelly, South Wales.

AS Assistant; 6 years' experience; aged 22; height, 6 ft.; London preferred. H. S., 10 High Street, Canterbury.

A S Junior; 4½ years' experience; aged 19. Long, Southgate, Chichester.

A S Assistant; 27: disengaged October 16th. "Spes," 15 Richmond Road, Shepherd's Bush.

LOCUM-TENENS; disengaged 19th. A. P. S., The Hollies, Brighton Road, Moseley, Birmingham.

TEMPORARY or Permanent; disengaged; moderate terms. "Beta," 52 Allen Road, Stoke Newington, N.

LOCUM-TENENS: town or country: disengaged; qualified (40). Williams, Chemist, 70 Ledbury Road, W.

OUTDOORS: experienced; aged 32: Wholesale or Retail; fluent French. D., 95 Mare Street, Hackney.

MANAGER or Assistant; outdoors; 8 years' reference; height 6 ft. W., 62 Brunswick Street, Hackney Road, E.

ASSISTANT or Manage Branch: single; unqualified; indoors; permanency preferred. Lumbus, Aston, Nantwich.

BRANCH or Temporary; good Retail and Prescriber; registered Dentist. 73 Shakespeare Road, Stoke Newington.

LOCUM-TENENS: experienced; disengaged October 21. "Locum," 2 Christchurch Road, Hemel Hempstead, Herts.

TRAVELLER (Junior); good references: experienced in Retail; abstainer. "Chemicus," Stratton House, Falmouth.

A S Junior; 5 years' experience in town and country business; London preferred. Collins, Lamb Street, Spitalfields, London.

JUNIOR or Dispenser, in good business; 5 years' experience; 20; 5 ft. 8 in.; abstainer. 47 Station Road, Redhill, Surrey.

ASSISTANT (26); height 5 feet 7 inches; 13 years' experience; Hall qualification; disengaged 21st. H., Endle, Boscombe.

A S Assistant in good Dispensing Business; aged 20½; good reference; outdoors preferred. Patrick, 12 Silver Street, Kettering, Norths.

TEMPORARY, or Manager of small business; registered Chemist. F. T. P., care of Buckley & Co., Chemists, Earl's Court Road, London.

LOCUM-TENENS: Midlands; qualified, thoroughly competent, steady, obliging, attentive. Calvert, Norman Street, Birmingham.

WITH view to Partnership or Succession; good class Business; fashionable healthy locality. Norton, 9 Brighton Parade, Blackpool.

ASSISTANT or Dispenser; high-class provincial and seaside experience; Midlands or West End preferred; aged 23. "Chemicus," Conway.

JUNIOR, passed Preliminary; 3 years' reference; aged 19; height 5 ft. 8 in.; London preferred. John Whitmell, Guilsborough, Northampton.

A S JUNIOR, or Dispenser to Medical man; good references and experience; tooth extractor. Wenlock, 8 Landseer Terrace, Albert Palace, S.W.

WHOLESALE.—Warehouseman or charge of a department; 18 years' experience. Address, "Wholesale," Pharmaceutical Rooms, York Place, Edinburgh.

ASSISTANT; experienced, reliable; Drugs, Dispensing, Stationery, and Post Office duties; good references; salary moderate. Bowe, 248 Soho Road, Handsworth, Birmingham.

TO Wholesale Chemists.—A retired M.P.S. is desirous of co-operating with a principal or principals in some capacity, to fill up his leisure time. "Beta," 8 Werndee Road, South Norwood.

A S Manager, Outdoor Assistant, or Dispenser to Doctor; good Prescriber; aged 23; if country, Norfolk preferred; first-class references. "Isis," 191 Morley Avenue, Noel Park, London, N.

ASSISTANT or Senior; aged 27; height 5 ft. 10 in.; 12 years' first-class experience; competent; highest references; unqualified; extractor. B., 17 Richford Street, Hammersmith, W.

DISPENSER to Medical Man, Hospital or otherwise (23); Apothecaries' Assistant's qualification; or Locum-Tenens to Chemist; previous experience. "Miscet-fat," St. Ann's Pharmacy, Buxton.

PRACTICAL CHEMIST.—A young gentleman, Doctor of Chemistry, is open for an engagement; he has studied and worked under the direction of Professor Graebe in Geneva, Professor Liebermann in Berlin, and Professor Friedel in Paris, and is master of the English, German, and French languages. H. F., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A S Manager of Branch; 20 years' experience. R., Brook Cottage, Southam.

A S Manager or Senior; disengaged; town and country experience; good references. M. B., 30 Loftus Road, Shepherd's Bush, W.

JUNIOR (21); good knowledge of Photography and scientific apparatus; well recommended. Wood, care of Mr. Dore, Chemist, Huddersfield.

BRANCH Manager or Assistant; unqualified; 36; height 5 ft. 8 in.; single; abstainer; accustomed to mixed country business; good references and experience. "Staim," 12 Chapel Street, Uxbridge.

CLERK, 12 years in Drug Trade, wants situation as Export Invoice Clerk; has a good knowledge of Spanish and understands shipping work. Address, "Drogas," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

WANTED, Instruction in Mechanical Dentistry; state terms, &c. Address, C. M., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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TO CAPITALISTS and others.—Required, Partner (sleeping or otherwise) with about £1,000 at command, to finance a valuable Embrocation of approved merit; every investigation allowed; money under own control; one connected with Chemical profession preferred. Apply, "Embryo," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

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PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. Student's Herbarium, 100 specimens, 7s. 6d., post free.

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Delicious Flavour. Brilliant and Attractive Appearance.
SELLS AT SIGHT.

Vide Dr. Tanner's Report, and The Chemist and Druggist, April 20th.
1/- Bottles, 9/- per doz.; 1-lb. Bottles, 22/- per doz.; 1-lb. Tins, 20/- per doz.
and in 4-lb. Jars, 1/6 per lb.

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SOLD EVERYWHERE.

Makes the best
**GRAVIES, SOUPS, &
SAUCES.**

IMPROVES
**STEWES and
HASHES.**

ASK YOUR GROCER FOR
CRAVINA
EDWARDS' GRAVY POWDER.
TRADE MARK.

REGISTERED

PUT UP
IN

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Sample Free on receipt of Business Card.

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Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

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NATURAL MINERAL WATERS

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RICHEST in mineral properties yet discovered. Issues at a lower temperature than any other Vichy waters.
PUREST and most palatable for mixing with Wine, Whisky or other Spirits, for Table use.
BEST for all who suffer from Sea Sickness, Dyspepsia, Sleeplessness, Biliousness, and all disorders of the Stomach.

ASK FOR IT at your Club, your Hotel, your Grocer's, your Wine Merchant's, or your Chemist's.
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"CYMRU AM BYTH."

"ABSOLUTELY PURE."



REGISTERED.

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CAUTION.—Corks branded "R. ELLIS & SON, RUTHIN." Every Label is Registered, and bears Name and Trade Mark (Goat on Shield).

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WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

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INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.— AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England

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FOR THICK LIQUIDS.

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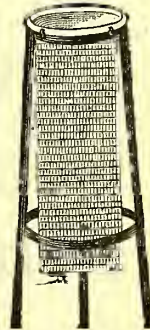
Used Extensively by Manufacturing Chemists and Druggists.

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FILTERING CLOTHS OF EVERY DESCRIPTION.

ANDREWS' FILTER CLOTH CO.,

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BRAGG'S

Undoubtedly the most natural preventative and curative agent in all cases of Indigestion, Disorders of the Liver, Fevers, Cholera,

Dysentery, &c.

The trade cannot do better than keep these old-established and safe preparations under the notice of their customers.

VEGETABLE CHARCOAL.

Sold in Powder, 2/-, 4/-, and 6/- bottles; also in Biscuits, 1/-, 2/-, and 4/- tins (Children like these), and in Lozenges, 1/1½ tins (portable and convenient).



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PEPTONATE OF IRON

PEPTONE OF MEAT

DENAEVER'S

LIQUID PEPTONES STERILIZED

Free from microbes!
Keep good for ever in all climates.
118 BISHOPSGATE STREET WITHIN, LONDON, E.C.

DENAEVER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitutions, children, and aged people.

DENAEVER'S PEPTONE OF MEAT. A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste. Of all Chemists and Wholesale Houses.

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CIGARS & CIGARETTES.

M. & R. PEACOCK,
Tobacco, Cigar, & Cigarette
Manufacturers,
KINGSLAND RD., LONDON, N.E.

Sole Manufacturers of the Celebrated
Brands—

"ROYAL CHARTER"

AND

"UPPER CRUST."

Sold in Packets only.

Those who deal in these Goods, or intend doing so should write to the above Manufacturers for Price List.

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In 1-oz., 2-oz., and 4-oz. Packets, and ¼, ½, 1 lb. Tins only.



TADDY & CO., 45 Minories, LONDON

ESTABLISHED 150 YEARS,

SNUFF, TOBACCO, AND SEGAR MANUFACTURERS.



Write for List of Specialities.

A WONDERFUL SUCCESS!!**NON-INTOXICATING BEER**

Made from MASON'S Original

EXTRACT of HERBS

(REGISTERED.)

Composed of Yarrow, Dandelion, Comfrey, & Horehound.
ENLARGEMENT OF SIZE.**A Sixpenny Bottle makes EIGHT GALLONS of
HERB or BOTANIC BEER****A NON-INTOXICATING BEVERAGE**

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.

BEWARE of mean and fraudulent imitations.**BEWARE** of others copying our title.**MASON'S** is the original and only genuine.**MASON'S** is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/, & 2/ each, with directions.

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Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

These are having a very large sale now, and are extensively advertised.

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SOLE INVENTORS &
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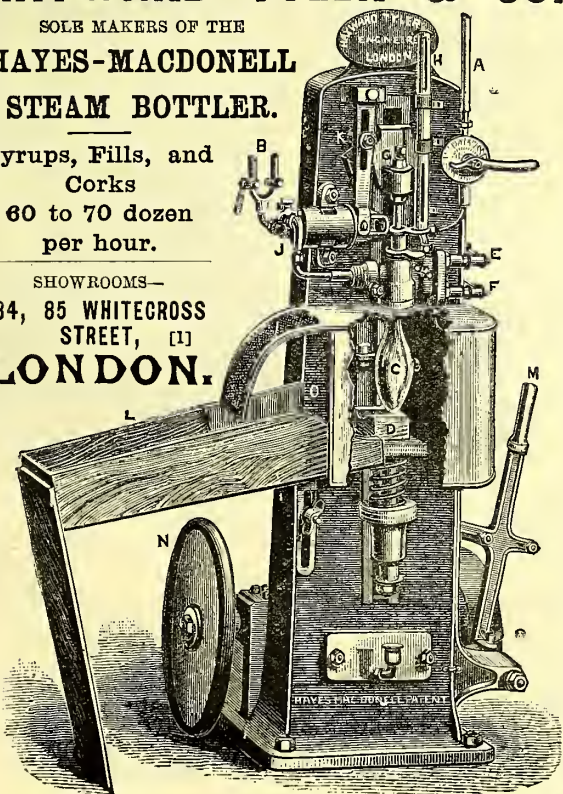
Manufacturing Chemists and Botanic Druggists. NOTTINGHAM.

HAYWARD TYLER & CO.

SOLE MAKERS OF THE

HAYES-MACDONELL**STEAM BOTTLER.**Syrups, Fills, and
Corks60 to 70 dozen
per hour.

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STREET, [1]
LONDON.
TYRER'S 8000
VALUE
SAUCES
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"BOROUGH" KETCHUP
THE GIANT 1d. BOTTLE OF SAUCE.

LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/6 per Gross.*

**"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE,
OR READING SAUCE.**

1d. Sample Bottles, dozen parcels	--	--	per gross 5/	extra quality 8/
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1d. "Giant" Bottles, dozen parcels	--	--	6/8	8/
1d. "Giant" Bottles, dozen parcels	--	--	6/8	8/
1d. Bottles (flat or round), reputed 1/2-pint	--	--	16/	24/
1d. Bottles (flat or round), reputed pint	--	--	28/	32/
1d. pint Imperial Round Stoppered Bottles	--	--	30/	38/
1d. pint Imperial	--	--	50/	60/
12 1/2-gallon Casks (casks free)..	--	--	each 20/	38/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.

A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

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The "Borough" Ketchup and Sauce Maker,

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BY SPECIAL
H.R.H. THE DUKE OF
ROYALAPPOINTMENT TO
CONNAUGHT AND THE
FAMILY.**BOURNE WATERS.**

THE PUREST IN ENGLAND.

R. M. MILLS & CO., BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS,
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.

Special attention is invited to our manufacture of

LITHIA WATER.Each Bottle contains an average dose of Carbonate of Lithia—
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Pints and Quarts for Table Use.

Prices and Pamphlet on application

Agents appointed.

Messrs. INGRAM & ROYLE, 52 Farringdon Street, Wholesale Agents for
the sale of our Waters.**DAHL'S DYSPEPSIA CAKES,**

As supplied to H.M. the Empress Eugenie.

For Indigestion and Constipation, 1s. and 2s. 6d. per box.

DAHL'S POWDERED CAKES,

For Specially Delicate Cases, 2s. 6d. per box.

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SAML CLARK'S
PATENT PYRAMID
FOOD WARMER
REGD 91241

ARE THE ONLY
LIGHTS SUITABLE
FOR THESE LAMPS

CLARK'S
PATENT PYRAMID
NIGHT LIGHT

OLD SHAPE

NEW SHAPE

OLD SHAPE

NEW SHAPE

**CLARKE'S IMPROVED PANAKINS (REGISTERED) FOR USE
WITH CLARKE'S "PYRAMID" NURSERY LAMP.**

WHOLESALE PRICES	{ No. 1	30/	per dozen.	} Cash discount, 5 per cent.
LAMPS COMPLETE	" 2	38/	"	
	" 3	36/	"	

N.B. Extras.	Porcelain Panakins per dozen, No. 1	...	6/	...	Lids	...	2/
	"	"	12	...	"	"	2/
	"	"	3	...	"	"	3/

Tin Panakins, No. 1, 8/ ... No. 2, 10/ ... No. 3,
Clear Glasses 4/ ... Roughed, 6/ ... Opaline, 6/ ... Coloured, 6/ ... Ruby, 8/
N.B.—Ask for CLARKE'S PANAKIN, and see that his name and the registered number
(Registered 91,241) is on the Panakin, and trade mark "PYRAMID."

Clarke's Patent "PYRAMID" NIGHT LIGHTS are the only Lights suitable for these Lamps.
Sold Retail by all respectable dealers, and Wholesale by the Patentee, S. CLARKE,
"PYRAMID" AND "FAIRY" LIGHT WORKS, CRICKLEWOOD, LONDON, N.W.
London Show Room—31, ELY PLACE, HOLBORN CIRCUS, E.C.

FOR INFANTS AND INVALIDS,
For use with CLARKE'S "PYRAMID" NURSERY LAMP FOOD WARMER,
with his NEW REGISTERED PANAKIN.

This is an invaluable, convenient, and useful appliance at the bedside, suitable for Invalids, and particularly for Patients whose Lights require Feeding during the night. It obviates the necessity of getting out of bed, as everything required for use can be put on the TRAY. The Tray is adapted for use in connection with Clarke's "Pyramid" Food Warmer, and when not required can be turned to the wall in such a manner as to Shade the Person in bed from the Rays of the Light.

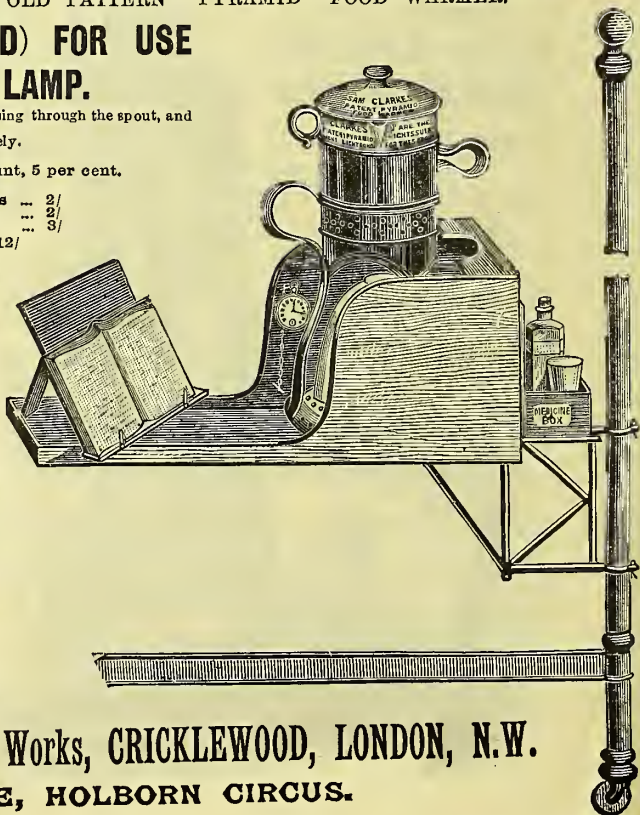
Invalide will find it a **Great Comfort**, for any book, plate, basin, &c., can be placed thereon ready for use, and obtained without altering the position in bed. By means of a Slide, the Tray can be pulled forward to the position or length required. It is **Highly Recommended** by the Medical Profession, and can be obtained from most dealers in Clarke's "Pyramid" and "Fairy" Lamps.

Tray, 15/, with Book Rest & Medicine Box, 21/, less 33½ per cent.
Food Warmer, see above.

If with Brass Bracket, 4s. extra. Adjustable Brass Support for book rest, 5s. extra.

DIRECTIONS FOR FIXING.—Place the Clips round the bed-post, insert the Thumbscrew in the square hole at the end of same, and screw as tightly as possible. The Clips being of spring steel, they will fit any size post. A little cloth or washleather should be placed round the bed-post to prevent scratching the post.

SAM'L. CLARKE, "Pyramid" and "Fairy" Light Works, CRICKLEWOOD, LONDON, N.W.
SHOW ROOMS—31 ELY PLACE, HOLBORN CIRCUS.





ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt,
and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skillful and judicious manner in which the respective ingredients have been proportioned and combined, the Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

ROBINSON'S ORANGE WINE.

Specially prepared for Quinine Wine, does not deposit, will keep good in any climate, and well adapted for Export Trade. Supplied in Cask containing 9, 18, 30, 60, or 120 Gallons. Terms on application. [2]

PHARMACEUTICAL SHERRY WINE.

This Wine is well adapted for Pharmaceutical Preparations, and is the strength ordered by the B.P. Price, in 6-Gallon Casks, 5/6 per gallon; in 2-Gallon Jars, 6/- per gallon, carriage paid. Casks charged 7/6. Jars 2/6, and allowed if returned. Cash or satisfactory reference to accompany order.
B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

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The injurious action of tea upon the digestion is due to the tannin it contains; and as this dissolves instantly in hot water, no method of infusion can keep it out. Santha is the only form of tea that has no action upon either food or membranes; and it is not bilious like cocoa and coffee. The *Lancet* of May 4th, 1889, says:—"The aroma and the caffeine are preserved, and the tannin is neutralised and rendered innocuous." The *London Medical Recorder* of Feb. 20th, 1889 says:—"Santha possesses the aromatic and stimulating qualities of the crude leaf, minus its astringency."

Santha is the only Tea suitable for Weak Digestions. Of Chemists. Price 1s. & 2s. 6d. Sample Bottles 6d. each; by post 7½d. sent direct from the works on receipt of stamps by the

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Wholesale Agents—BARCLAY & SONS (Lim.), Farringdon Street, LONDON, E.C.

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"Were it possible to furnish the market at a reasonable price with a preparation of meat, combining in itself the albuminous together with the extractive principles, such a preparation would have to be preferred to the Extractum Carnis, for it would contain all the nutritive constituents of meat." Again—"I have before stated that in preparing the Extract of Meat, the Albuminous principles remain in the residue, they are lost to nutrition, and this is certainly a great disadvantage."

"BOVRIL" contains the albumin and fibrine in the most perfect possible form, and to those who know the requirements of the human system and the constituents of food, it will be apparent that this albumin and fibrine is identical with what the body requires for recuperation, and that as a perfect form of concentrated nourishment it must supersede any animal aliment at present known.

"BOVRIL" has solved the problem of the great German Chemist.
"BOVRIL" is Baron Liebig's ideal realised.

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They are introduced to the public to enable them to make their own HOP BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given in each packet.

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P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.

Dealers in every description of Isinglass.

ENGLISH HOPS.

Best Hops compressed into small parcels of one pound and half-pound, and sent out in cases containing 30 lbs. each. These hops are specially selected and compressed for keeping purposes, and will retain their aromatic strength for a considerable time.

"RAMORNIE." LIEBIG'S Extract of Meat.

As supplied to the War and India Offices.

1-lb. Jars.....per lb.	6/2	per doz.	74/0	2-oz. Jars.....per lb.	7/0	per doz.	10/6
1-lb. Jars....."	6/4	"	88/0	1-oz. Jars....."	7/8	"	5/6
4-oz. Jars....."	6/7	"	19/9	4-oz. Jars....."	8/0	"	3/0

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6 lbs. Carriage Free.

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ROBERT GIBSON & SONS,

Medicated Lozenge Manufacturers,
CARLTON WORKS, ERSKINE STREET, HULME, MANCHESTER,
 1 Australian Avenue, London, and 44 Alter Wall, Hamburg.

GIBSON'S SUPERIOR BOILED SUGARS

Have gained a High Reputation everywhere. **FOR EXPORT TRADE.** They are put up in 1-lb., 2-lb., and 5-lb. Bottles. Packed in Casks or in 1-doz. Cases as required, and delivered F.O.B. at any Port in England. These Sweets are absolutely pure. We specially recommend

Lime Fruit Tablets, Everton Toffy, Mixed Fruit Drops, Cough Drops, Raspberry Drops, Lemon Tablets.

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Musk, Rose, Mint, and other Flavours. In 1-lb. White Glass Bottles. Bottles free

COMPRESSED CHLORATE OF POTASH PELLETS, SACCHARINE PELLETS,

And PELLETS of every description, put up in 1-lb. White Flint Glass Bottles, with Boxwood Top Corks. Bottles not Charged.

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OF EVERY DESCRIPTION.

Chlorodyne Cough Lozenges, Chlorodyne Jujubes, Peppermint Lozenges,

In every variety of size and strength. Curiously Strong, and Multum in Parvo Mints give the utmost satisfaction. Medicated Lozenges of Pharmacopœia Strength.

DIGESTIVE TABLETS. VOICE AND THROAT LOZENGES for Singers and Public Speakers.

ORIGINAL SUGAR WORM CAKES

Have an immense sale, both at home and abroad; will keep in any climate, and give entire satisfaction. Put up in Tins containing 3 doz., 6 doz., and 12 doz. cakes.

THROAT HOSPITAL LOZENGES

(As per T. H. Pharmacopœia).

All Lozenges are sent out in 2-lb. and 4-lb. Bottles (bottles free), but allowed for if returned.

PROPRIETARY LOZENGES CAREFULLY PREPARED, STAMPED, AND CUT TO ANY SIZE OR SHAPE.

PRICE LISTS SENT ON APPLICATION.

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 AND
Mr. THOS. LAKEMAN, 34 Pitt Street, Sydney, for Australia.

Telephone Number, 1852.

Telegraphic Address—CHEMICUS LONDON.

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AERTD & MINERLS Apollinaris (Hungarian Aërated Water, Diamond Mark, Friedrichshall Apollinaris) Barnett and Foster Cedley Abbey Mineral Water Chemists' Aërated and Mineral Water Association. Ellis (Ruthin) Hassall and Co. (Citric Acid Phospho) Hay, W. Idris and Co. Jewsbury and Brown Mills and Co. (Bourne) St. Louis Natural Mineral Water Taylor, T. and F. J. [See GINGER ALE.]	AGNCIES ABROAD Australian Drug Co. Cocking and Co. (Japan) Felton, Grimwade and Co. (Melbourne) Fitzgerald, W. C. Fougers and Co. (New York) Kempthorpe, Prosser & Co. N.Z. Linnon, R. G., and Co. Levy, Jules Peake, Allen and Co. Petersen, P. J., and Co. Prosser, Taylor and Co. Rich, E. C., Co. Roberts (Paris, &c.) Rooks, Tompsett and Co. (Melbourne) Soul, W. H., and Co.	BAKING POWDER Dunn, W. G., and Co. Goodall, Backhouse & Co. SANDAGGES Bailey, W. H., and Son Robinson and Sons Schutze, F., and Co. Seahury and Johnson BEESWAX Bowdlear, W. H., and Co. Luncheurger Wax Bleaching Works BICARB. SODA Brunner, Mond and Co., Lim. Howards and Sons May and Baker BISMUTH, PREP. Hearn, Squires and Francis Hewlett and Sons Howards and Sons May and Baker Symes and Co. White, Alfred, and Sons	BOTANIC BEER Newhall and Mason BOTTLES Aire and Calder Bottle Co. (Ld.) Bailey, M., and Co. Barnett and Foster Barrett, E. H. Bratby and Hinchliffe Brethitts (Lim.) Evans, Sons and Co. Hearn, E. A., and Co. Hunt, W. F. (Caps) Isaacs and Co. Kilner Bros. Maw, Son and Thompson Poths, H., and Co. Sanders, H. G., and Son Shirley, A. W. Taylor, E., and Co. Toogood Youldon, E.	CAMPBOR Fuerst Bros. Howards and Sons Keens and Ashwell (Homoeo- pathic) CAPSULES Denoual, J. (Medicinal) Duncan, Flockhart and Co. Evans, Sons and Co. Hooper, B., and Co. Maw, S. Son and Thompson Robertson, J., and Co. CAPSULES (METALLIC) Batts and Co. Makin, O. (Machine) Sanders, H. G., and Son CARMINE Bush, W. J., and Co. CSCRA SAGRADA Duncan, Flockhart and Co. Evans, Sons and Co. Farris and Co. Moss, J., and Co. Soutie and Sons CASTOR OIL Fuerst Bros. CATALOGUE Evans, Sons and Co. Maw, Son and Thompson. May, Roberts and Co. Savage and Son Schutze, F., and Co. Thompson, Walters, Hole and Co. (Limited) CEMENT Foulkes, W. J. Kay Bros., Lim. Mumford, R.
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CHALK PRECIP.

Dunn and Co.
Levermore, Aug., and Co.
White, A., and Sons.

CHEMICALS

Andreas, Oscar and Co.
Boehm, F.
Bramwell and Son
Brunner, Mond and Co., Lim.
Bush, W., Son and Co.
Dunn and Co.
Fletcher Fletcher and Stevenson
Goodall, Backhouse and Co.
Hill, A. S., and Son
Howards and Son (Pharm.)
Kuhn, B.
Levermore, Aug., and Co.
Lofthouse and Saltmer
May and Baker
Morris and Callard
Moss and Co.
Pronk, Davis and Co.
Stern, G. and G. (Pumiline)
Smith, T. and H., and Co.
Typle and King
White, A., and Sons
Zimmermann, A. and M.

CHEST PROTECTORS

Bailey, W. H., and Son
Evans, Sons and Co.
Hockin, Wilson and Co.
Liverpool Lint Co.
Lynch and Co.
Maw, Son and Thompson, S.
Sanger and Son
Schutze, F., and Co.
Thompson, Walters, Hole and Co. (Limited)
Wood, Vincent

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Rowland, L.
Müller, P.

CHL. OF POTASH

Burroughs, Wellcome and Co.
Hooper, B., and Co.

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Government Sanitary Co.
National Chemical Co.

CHLORODYNE

Davenport (Browne's)
Freeman, R.

CHLOROFORM, &c.

Towle, A. P., and Son

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Macfarlan, J. F., and Son
Smith, T. and H., and Co.
Wright, Layman and Umney
Zimmermann, A., and Son

CITRIC ACID

Hassall (Phospho)

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Howards and Sons

COCA WINE

Armstrong, Nelson and Co.
Evans, Sons and Co.
French Hygienic Soc.

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Fry and Sons
Rowntree and Co.
Scheibler Bros. and Co.
Van Houten's Cocoa

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Brekke and Howld
Burroughs, Wellcome and Co.
Evans, Sons and Co.
Hill, A. S., and Son
Lofthouse and Saltmer
Oppenheimer Bros. and Co.
Smith, T. J.
Woolley, Sons and Co.
Wright, Layman and Umney

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COLFISBLE TUBES

Betts and Co.
Brooks, Peel and Co.
Sanders, H. G., & Son

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Blyton, T. Bage, and Co.
Burroughs, Wellcome and Co.
Fuerst Bros.
Hooper, B., and Co.
Leo and Co.
Wyleys and Co.

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Gibson, R., and Sons
Kerfoot, T.
Pascall, J.
Warrick Brothers

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Fletcher, Fletcher & Stevenson

CORN CURES

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Robinson, B.
Seabury & Johnson (Plasters)
Solport Bros. (Plasters)
Thompson, M. F.
Young, H.

COTTON WOOL

Haynes, G., & Co. (Absorbent)
Robinson and Sons (Absorbent)
Sanger, J., and Sons
Seabury and Johnson

CRSED LINSEED

Mumford, G. S.

DENTIFRICES

Fentiman & Co.
Jewsbury and Brown
Maw, Son and Thompson, S.
Newbery and Sons
Rech, H.
Sutton, O., and Co.
Thompson and Capper
Warrick Bros.
Woods, W. (Arecia Nut)

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Carter, J. H.

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Spratts (Patent)

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Hamilton and Co.

Jeyes' Sanitary Compound
National Chemical Co.
Seabury and Johnson
Sanitas Co.

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Evans, Sons, and Co. (Savars)
Hill, A. S., and Son
Hockin, Wilson and Co.
Iris and Co.
Kay Bros., Lim.
Lynch and Co.
Marriot, E., and Co.
Maw, Son and Thompson, S.
May, Roberts and Co.
Sanger and Son
Schutze and Co.
Thompson, Walters, Hole and Co.
Toogood, W.
Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

DYES

Pronk, Davis and Co.

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Parina, J. M.
Shirley, A. W.

EFFERVESCENT

Allen and Hanbury

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Gent and Co.
Orme and Co.

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Elliman, Sons and Co.

ENEMAS

Bailey, W. H., and Son
Ingram and Son
Lynch and Co.
Maw, Son and Thompson, S.
Sanger and Son
Schutze, F., and Co.

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Corsan, J. H. (Glass)
Harris, A. J. (Glass)

ESSENTIAL OILS

Boehm, F.
Bush, W., Son and Co.
Cocking (Japan Peppermint)
Cummock, J.
Duckworth and Co.
Evans, Sons and Co.
May and Baker
Stevenson and Howell
Syms and Co.
Teast, R. C.
Warrick Brothers
Wright, Layman and Umney
Vost, G.

ESSENCES

Beckett, W.
Boehm, F.
Brady and Hinchliffe
Burgoyne, Burdidge and Co.
Bush, W. J., and Co.
Cummock, J.
Duckworth and Co.
Goodall, Backhouse and Co.
Hay, W.
Idris and Co.
May and Baker
Oldfield, Pattinson and Co.
Southwell, C., and Co.
Stevenson and Howell
Tyrer, P. (Anchovies)
Woolley, Sons and Co.

ETHER

Duncan, Flockhart and Co.
Howards and Son
May and Baker
Robbins
White, A., and Sons
Woolley, Sons and Co.
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Hooper, B., & Co.
Moss and Co.
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Liebig Co.

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Kilner Bros.
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Marriot, E., and Co.
May, Roberts and Co.
Thompson, Walters, Hole and Co. (Limited)
Toogood, W.

FLY PAPERS

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Mather, W.

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Doulton and Co.
Lawson, Swan and Weddell
Silitated Carbon Filter Co.
Thompson, Walters, Hole and Co. (Limited)
Toogood, W.

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Bovril (Limited)
Brand and Co.
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Dahl's Dyspepsia Cakes
Goodall, Backhouse and Co.
Hearon, Squire (Malted)
King, F., and Co., Lim.
Liebig Co.
Mottershead & Co. (Benger's Food)
Nestle, H.

FORMULAE

Brooks, T.

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Hay, W. (Essences)
Kimmond and Co.
Mills, R. M., and Co.

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Pink and Co.
Puerst Bros.
Price's Candle Co.
Van Geelkerken and Co.

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Ourtis and Co.
Evans, Sons and Co.
Hearon, Squire and Francis
Hill, A. S., and Son
Kerfoot, T.
Wright, Layman and Umney

GUM

Pink (Aralia, &c.)
Hyde, Nash and Co.
Knight and Co.
Levermore Aug., and Co.
Pronk, Davis and Co.

GUTTAPERCHA

Duncan, Flockhart and Co.

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Cheesebrough Mnf. Co.
Queleh, H. C.
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Oldfield, Pattinson and Co.

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Newhall and Mason (Extract of Herbs)
Potter and Clarke (Extract of Herbs)
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Keene and Ashwell
Leath and Ross
Thompson and Capper
Watson and Wates

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Hay, W.

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Dunn and Co.
Fellows
Fletcher, Fletcher and Co.
Syms and Co.
Typle and King

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Sanford
Steiner and Co.
Vogt, G.

INE [See MARKING]

Bewley and Draper
Duncan, Flockhart and Co.

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Tyrer, P.

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LEECHES

Fitch and Nottingham
Potter and Clarke

LIME JUICE

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Idris and Co.
Hockin, Wilson and Co.
Southwell, C., and Co.

LINT

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Maw, Son and Thompson, S.
Newsome, C.
Robinson and Sons
Seahury and Johnson

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Blyton, T. Bage, and Co.
Gibson, R., and Sons (Mantfr.)
Hill and Son
Kerfoot, T.
Martindale, W.
Pascall, J.
Raines and Co.
Randall and Son
Warrick Bros.

MACHINERY

Burroughs, Wellcome and Co.
Carter, J. H.
Goodall, E. F.
Holroyd & Co. (Limited)
McFerran, J. A.
Melin, C. (Capsuling)
Pontifex and Wood
Werner and Pfeiderer

MAGNESIA

Andreas, Oscar, and Co.
Brash, W., Son and Co.
Dinneford

MALT EXTRACT, &c.

Burroughs, Wellcome and Co. (Kepler's)
Hearon, Squire and Francis
Oppenheimer Bros. and Co.

MARKING INKS

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Hickiss, J.

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Day and Sons (Veterinary)

MENTHOL

A1 Menthol Depot, A. W.
Shirley, Proprietor
Cocking and Co.
Hockin, Wilson and Co.
Maw, Son and Thompson, S.
Shirley, A. W.

MERCURIALS

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May and Baker

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Spirits

Burrough, J.
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Jones and Co.
Phillips, G., and Co.

METHYLENE

Rohms, J., and Co.

MICROSCOPES

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Perkin, Son and Kaysment

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Nestle, H. (Condensed)
Swiss Milk Co.

MIXING

Bracher and Co.
Carter, J. H.
Werner and Pfeiderer

MORPHIA

Macfarlan, J. F., and Co.
Smith, T. and H.

MUSTARD

Johnson, J. H. and S. (Ess. Oil)

OILS, PAINTS, &c.

Anglo-American Oil Co. (Lim.)
Colthurst and Harding
Fox, W., and Sons
Pronk, Davis and Co.

OPTICIANS

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Raphael, J., and Co.

ointment BASES

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Burroughs, Wellcome and Co.
Cheesebrough (Vaseline)
Green, S. (Singapore's Eyes)
Grindley (Petroleum Jelly)
Roberts and Co., Vinolia &c.
Syms and Co.
White, Alfred, and Sons
Woolley, Sons and Co.
Wyleys (Various)

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Shipoff and Co.
Treat, R. C.

PAPAIN FINKLER

Kuhn, B.

PEPSINE, &c.

Burroughs, Wellcome and Co.
Claridge and Co.
Fletcher, Fletcher & Stevenson
Newbery (Inglutin)
Warner and Co. (Inglutin)
Zimmermann

PARALDEHYDE

Zimmermann, A. and M.

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Horn and Son

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Albert and Co.
Armstrong, Nelson and Co.
Atkinson and Barber (Infant Preserv)
Barclay and Sons (Limited)
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Beadler, J., and Co.
Crouch, F. B. (Waters)
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Edwards and Son
Evans, Lescher and Webb
Fenning's (Powders)
Goodall, Backhouse and Co.
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Kemp, W. H.
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Mason, W. B.
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Sequal (Limited)
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Swift's Specific Co.
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Foulkes, W. J.
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Perkins and Jewell
Price's Patent Candle Co.
Rouse & Co.
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Shipoff and Co.
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Travado, S., and Co.
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Violet
Warrick Brothers
Wedlake, M.
West, T. (Oxell's Moss)
Woolley, Sons & Co. (Powders)

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PEPPERMINT OIL

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Dunn and Co.
Rohms and Co.

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Barron, Squire and Co.
Becker and Kirsten
Billault
Boehm, F.
Brady and Martin
Burgoyne, Burdidge
Burroughs, Wellcome & Co.
Chanteaud, G.
Chassaling and Co.
Dee Oil Co. (Lim.) (Petrols)
Duncan, Flockhart and Co.
Farris and Co.
Fletcher (Liquors for Syrups)
Hearon, Squire and Francis
Hewlett and Son
Hill, A. S., and Son
Hooper, B., and Co.
Howards and Sons
Keith (Conc. Tinctures)
May and Baker (Phenacetine)
Roberts and Co., Vinolia &c.
Syms and Co.
White, Alfred, and Sons
Woolley, Sons and Co.
Wyleys (Various)

PHOTOGRAPHIC

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Howards and Son (Chemicals)
Fry and Co. (Limited)
Marion and Co.
May and Baker
Orme, J., and Co.
White, Alfred, and Sons

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Stern, G. and G.

PILLS (Coated, &c.)

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Beecham, Thomas
Evans, Sons and Co.
Holloways
McKesson and Robbins
Newbery and Sons
Penny Quinine
Warner, W. R. (Coated)
Wyleys and Co.

PILL MACHINES

Pindar, J. W.
Robertson, J., & Co. (Coating)
Toogood, W. (Coater)

PLASTERS

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Johnson and Johnson
Mather, W.
Quilliam, J., and Co.
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Seabury and Johnson
Thompson, M. F.
Younis, H.

PODOPHYLLIN, &c.

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Smith, T. and H.

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Oakley, John, and Sons
Griffiths, T. M.

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Toogood, (E.c. Pots, rsglat.)

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Ford, Shapland and Co.
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Townsend, J.

PUMILINE

Stern, G. and G.

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Howards and Sons
Kuhn, B.
Rivers, Hicks (Penny Quinine)
Zimmermann and Co.

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RENNET

Duncan, Flockhart and Co.
Johnsen and Jørgensen
Oldfield, Pattinson and Co.

SACCHARIN

Allen and Hanbarys
Burroughs, Wellcome and Co.

SALICIN

Macfarlan and Co.
Smith, T. and H., and Co.

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(Kolbe's)

Fuerst Bros.

SALOL

Kuhn, B.

SAUCES, PICKLES

Goodall, Backhouse and Co.
Tyrer, P.

SCHOOLS, &c.

Bailey and Coates
Bollingbrook House
Central School of Chemistry
and Pharmacy
City School of Chemistry and
Pharmacy (Lim.)
Liverpool School of Pharmacy
London Homoeopathic and
Medical School
Manchester College
Polytechnic Institute
South London School of
Pharmacy, Lim.
The School of Pharmacy
Westminster College

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Chiswick Soap Co.
Cook, E., and Co.
Pears' Soap

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Evans, Sons and Co.
Fevre, T.
Gerant, E., and Co.

Idris and Co.

May, Roberts and Co.

Tomlinson and Hayward

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Bygrave, J. and W.
Corsan, J. B.
Evans, Sons and Co.
Howlett, S.
Natali, E. (Show Cases)
Pothe, H., and Co.
Treble, G., and Son
Yates, W. S.

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Burroughs (Purs and Methyl.)
Harvey, J. W., and Co.
Jones and Co. (Methyl.)
Leslie, J., and Co.
Macnair, A., and Co.
Macnair, J. and D., and Co.
Phillips and Co.
Smith, Stephen and Co.

SPONGE

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Maw, Son & Thompson (Bags)
Peterson M., and Co.

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Botwright and Grey
Darton, F., and Co.
Raphael and Co.

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Hickinson, J.
Pollard, A. W.

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Barnett and Foster (The
Eclipse)
Sanders, H. G., and Son

STOVES

Clark, S. and Co.

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Ayrton and Saunders
Bailey, W. H., and Son
Barclay and Sons (Limited)
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Eschmann Bros. and Walsh
Haywood, J. H.
Ingram and Son
Liverpool Patent Lint Co.
Milns, J.
Robinson and Sons
Schutze, F., and Co.
Thompson, Walters, Hols and
Co. (Limited)
Wood, Vincent
Woolley, Sons and Co.

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" $\frac{1}{4}$ gr.	7/	24/	" 2 gr.	5/6	18/
" Compound 1 gr.	11/	40/	" 3 gr.	7/6	26/
" and Strychnine 7/	24/	40/	" 4 gr.	9/6	34/
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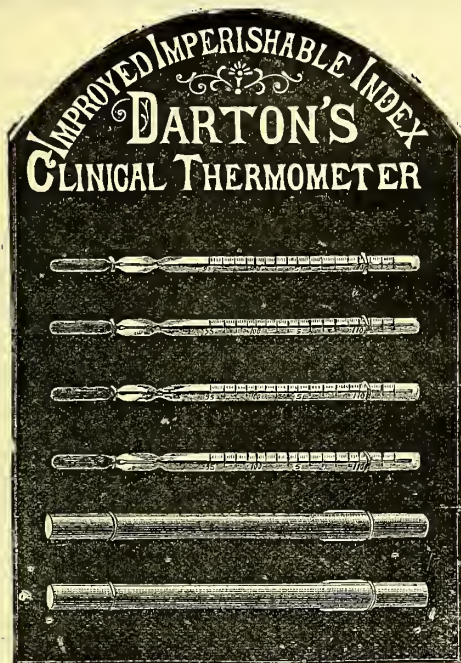


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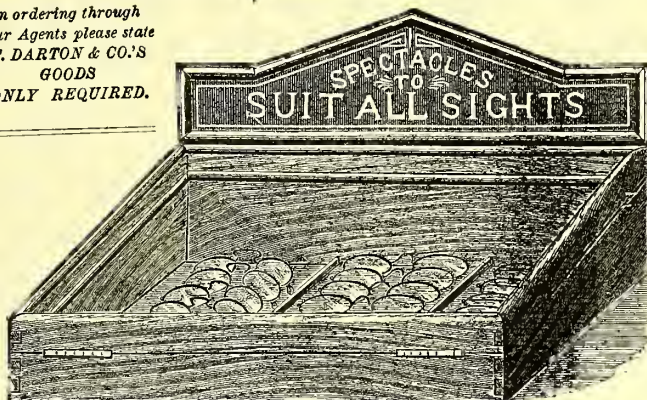
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Dermatopathy.

LONDON.]

OCTOBER 12TH.

[1889.]

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Sulphur has been used in medicine for centuries, its great drawback being a suitable mode of administration. In the form of Compressed Tabloids, combined with the pleasant acidulous cream of tartar, as suggested by Sir Alfred Garrod, the most fastidious patients do not object to its use as a medicine.

Dr. Garrod, alluding, in a recent number of the *Lancet*, to the physiological effects of sulphur when given in small doses, remarks that he has "seen the most marked beneficial effects from continuous sulphur treatment." Its exhibition has been attended with success in morbid conditions of the alimentary canal and pulmonary passages, cystitis and diseases of the urinary tract, affections of the skin and mucous membranes, chronic articular diseases and morbid conditions of the muscular system.

The Compound Sulphur Tabloids are perfectly preserved, packed in oval bottles, convenient for carrying in the waistcoat pocket, and for palatability and elegance are a distinct advance in the pharmaceutical preparation of this drug.

Compound Sulphur Tabloids supplied to the Trade in bottles of 25 and 100 Tabloids, at 4s. 6d. and 12s. 6d. per doz. Retail, 6d. and 1s. 6d. each.

ICHTHYOL

AS AN EXTERNAL REMEDY IN SKIN DISEASES.

Ichthyol (Ammon. Sulpho-Ichthyolate) is a distillation derived from the fossilised remains of fishes, and was discovered by Schröter. Dr. Charles J. R. McLean, Yeadon (*British Medical Journal*, March 9, 1889), says that it acts in three ways: (1) AS A PROTECTIVE.—When a solution of it is painted over the skin surface it quickly dries, forming a thin layer somewhat resembling friar's balsam or collodion, and so protects the skin from the air, dust, &c. (2) AS A RELIEVER OF CONGESTION.—When applied to healthy skin its effects seem *nil*, but where there is an active congestion of the part it acts promptly by causing contraction of the arterioles, and so diminishes the vascularity of the part. (3) AS A DESICCANT.—As it reduces the vascularity of congested skin, the outward flow of serum is also reduced, and consequently the part becomes drier. In these three actions are the essentials of the treatment of many skin diseases. Dr. McLean has used Ichthyol in the following cases with marked success:—Simple Erythematous Eczema, Scaly Dry Eczema, Weeping Eczema, Simple Erysipelas, Furunculosis, and Urticaria.

Ichthyol supplied to the Trade at 15s. per lb., also in 1-oz. bottles at 16s. per doz.

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CASCARA SAGRADA TABLOIDS.

In most cases of Eczema, Tabloids of Cascara Sagrada are being prescribed as a laxative. Cascara Sagrada stimulates the liver and helps to eliminate any excess of uric acid, which is believed to coexist with, or be the cause of, many such troubles.

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Arsenic, as is well known, has long been used and held in high esteem as a remedy in the treatment of Chronic Eczema. In the form of Tabloids, each containing 1/50 or 1/100 gr. of Arsenious Acid, the quantity is accurately apportioned and prevents the risk of a poisonous dose being taken. Mistakes are very liable to occur when arsenic is given in solution.

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AS A BASIS FOR OINTMENTS.

Lanoline (Liebreich) is the fat natural to the skin, and is absorbed by this structure at once. It is absolutely neutral (as distinguished from all imitations, which contain free fatty acids), and never turns rancid, thus differing from ordinary fats. Lanolin is of desirable consistence, does not melt below body heat, is homogeneous, and free from hard crystalline bodies. It will combine with water, and is miscible with all medicaments indifferently. So penetrating is Lanoline that but half the usual quantity of any drug ordinarily employed in making ointments should be used. Through the instrumentality of this agent, Narcotics, Quinine, Iodide of Potassium, Ichthyol, Mercury, and all medicaments prescribed in skin diseases have been satisfactorily introduced into the system. It never irritates, and is always grateful. Lanoline has been used as a basis for ointments in Scabies, Psoriasis, Scrofuloderma, Pruritus, Erythema, Sycosis, Tinea Versicolor, Epithelioma, Lupus, Eczema, Dermatitis, &c. It is now employed by all dermatologists with brilliant results.

Lanoline (Liebreich) supplied to the Trade in 1-lb. and 7-lb. tins at 2s. 8d. per lb. Anhydrous Lanoline (Lanolinum Anhydricum), at 3s. 4d. per lb. Lanoline Base (Ung. Lanolini), 2s. 2d. per lb. Anhydrous Lanoline Base, 2s. 10d. per lb. Ceresin, 1s. 6d. per lb. Paraffinum Liquidum, 1s. per lb. (packages extra). Lanoline Cold Cream supplied in pots at 14s. per doz. Lanoline Hazeline Ointment, in pots at 14s. per doz. Lanoline Pomade, in pots at 14s. per doz. Lanoline Toilet Soap, 8s. per doz. Lanoline Eucalyptine Soap, 8s. per doz. Lanoline Pinol Soap, 8s. per doz. Toilet Lanoline, in tubes at 4s. 6d. per doz. Lano-Creolin supplied in collapsible tubes at 9s. per doz.

A Pamphlet on the "Place of Lanoline in Pharmacy" will be sent post free to any Chemist on request.

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SULPHONAL-BAYER TABLOIDS.

From an extensive use of Sulphonal in private and hospital practice, covering cases of insanity [mania and melancholia], delirium tremens, morphine habit, sleeplessness from mitral insufficiency, from syphilis, from malarial poisoning, from anamia, and in Bright's disease, the following conclusions have been arrived at, viz. :—



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(4) Its advantages over other hypnotic remedies are: that it does not constipate as do the preparations of opium; the sleep produced by it seems to more closely resemble natural sleep than does that of any other drug; having neither taste nor odour, it is easily given in cases where patients object to taking medicines.

The Tabloids are recommended as being more readily assimilated. Sulphonal in crystals or coarse powder is very insoluble, but when the Tabloids are compressed the crystals are reduced to an impalpable powder, which enhances its solubility in the stomach.

Sulphonal Tabloids (5 gr.) are supplied in bottles of 25 and 100, at 12/- and 36/- per dozen; Sulphonal-Bayer supplied to the Trade at 1/6 per oz. (subject to fluctuation).

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For use in Angina Pectoris, Asthma, and similar complaints, by Inhalation.

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(REGISTERED.)

An agreeable Aromatic Fluid Extract of *Cascara Sagrada*, possessing the full laxative and aperient properties of the bark.

Sol. Æthyl Nitritis.

Containing 3 per cent. of Pure Nitrite of Ethyl, in Absolute Alcohol and Glycerine.

See paper by Professor LEECH on "The Comparative Effects of Spiritus Ætheris Nitrosi and Solution of Ethyl Nitrite," *Pharmaceutical Journal*, December 22, 1888.

Spiritus Ætheris Nitrosi.

Guaranteed to contain the proportion of Nitrous Ether directed by the British Pharmacopœia.

Æther Nitrosus and Sol. Ætheris Nitrosi.

Respectively 8 and 4 times the strength of the Spirit.

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ESTABLISHED 1858.

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South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

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THE IRISH PHARMACEUTICAL SOCIETY.—For some unaccountable reason the report of the annual meeting fixed to be held on Monday last at 7.30 P.M., which we had arranged for, has not come to hand, and our telegrams of inquiry remain unanswered up to the time of going to press.

PUBLISHER'S NOTICE.—We are now preparing THE CHEMISTS' AND DRUGGISTS' DIARY for 1890, and in order to supply our numerous subscribers in the Australasian Colonies before the new year we must go to press before the end of this month. Advertisements in this work are before the drug world all through the year, and the book being now established as an encyclopædic reference-book on thousands of drug-dealers' desks, its value as an advertising medium is unsurpassable. Firms who wish to have a place in its pages are requested to communicate with the publisher without delay.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of the principal drugs in the port of London on September 30, 1889, and to the imports and deliveries from January 1 to September 30, as compared with the preceding year:—

Articles	Stocks		Imported		Delivered	
	1889	1888	1889	1888	1889	1888
Aloes ..cs & pkgs	7,371	6,642	2,919	5,184	2,577	4,234
" ..gourds	1,655	2,393	318	755	772	4,040
Anise, Star ..chts	71	154	40	100	108	126
Arrowroot cks	13,545	14,601	12,406	13,003	9,727	11,363
" ..bxs & tins	5,939	7,829	1,729	4,344	3,600	6,561
Balsams ..cks, &c.	2,565	214	266	153	344	534
Bark (Cinchona),						
S.American cases	484		12		34	
bls. &c.	33,468		10,176		10,981	
E.I., Ceylon, and						
Java	557		932		971	
bls. &c.	25,792		37,799		33,915	
Borax	566	1,881	6	717	58	71
Calumba	1,749	1,952	652	1,118	747	1,818
Camphor	573	2,310	2,128	5,952	2,692	5,620
Cardamoms ..chts	1,444	831	2,749	2,203	1,884	2,112
Cocc. Ind. bgs, &c.	182	555	94	712	261	443
Cream of Tartar cks	17	11	30	20	23	22
Cubebs	337	286	603	520	390	347
Dragon's Blood cchts	173	59	193	137	100	157
Galls, China, &c. cs	1,407	3,235	2,412	8,207	3,130	6,782
Turkey, &c. sks	5,516	3,549	8,388	6,193	5,589	5,701
Gums—						
Ammoniac pkgs	112	147	6	8	19	91
Animi & Copal						
pkgs	5,079	4,698	5,596	6,929	5,480	6,609
Arabic	24,040	17,809	24,477	24,288	19,968	17,648
Asafoetida ..	510	635	897	452	736	367
Benjamin ..	2,244	2,006	2,708	2,424	2,351	1,976
Damar	3,996	2,580	5,414	3,461	4,929	4,320
Galbanum ..	7	—	7	—	—	—
Gamboge ..	89	90	265	155	269	171
Guaiacum ..	12	30	115	6	119	53
Kino	121	101	58	66	21	56
Kowrie	1,218	1,397	1,877	2,461	1,989	2,051
Mastic	40	115	26	55	17	39
Myrrh	417	463	270	412	358	503
Oilbanum ..	5,033	4,645	8,045	6,953	5,705	6,225
Sandalac ..	581	1,100	717	1,215	893	1,217
Tragacanth	8,992	4,718	8,311	7,454	5,057	4,641
* Indianrubber, E.I.						
tons	310	392	410	573	489	436
Madagascar ..	22	43	103	104	105	86
S. American ..	65	124	172	299	159	288
African, &c.	327	604	392	779	583	773
Ipecac. ..cks & bgs	439	78	1,086	445	675	489
Jalap	71	167	1	182	17	166
Lac Dye	5,750	6,033	—	—	130	438
Myrabolans ..tns	5,822	7,982	6,985	6,156	8,798	8,770
Nux Vomica pkgs	316	900	502	1,521	1,284	1,158
Oils—						
† Anise	63	24	239	103	182	148
† Jassia	71	32	238	119	215	199
Castor	364	671	670	331	881	551
"	2,370	10,444	3,187	11,776	7,825	8,842
Coccol-nut	2,079	1,485	3,541	3,427	2,855	3,758
Olive ..cks, &c.	940	634	3,420	1,663	2,841	1,716
Palm	24	225	74	179	110	162
Opium ..chts, &c.	1,205	1,586	537	648	949	1,167
Rhubarb	840	1,127	892	1,123	1,075	1,223
Safflower	524	536	32	474	97	310
Sarsaparilla	314	493	911	1,139	983	1,143
Senna bls, &c.	1,350	1,243	1,352	1,745	1,900	3,028
Shellac, Orange						
chts, &c.	43,302	49,755	15,630	32,951	19,052	24,876
Garnet ..	13,148	17,759	6,456	9,717	8,517	6,878
Button ..	6,032	10,244	4,549	6,492	6,329	7,434
Total	62,502	77,758	26,635	49,160	33,898	39,188
Sticklac ..chts, &c.	3,529	3,777	950	972	1,248	1,575
Gambier	653	197	6,305	7,237	6,811	8,864
Cutch	3,273	2,540	2,976	4,527	3,067	2,944
Turmeric	2,687	3,206	377	1,516	915	908
Vermilion,chts, &c.	15	2	110	54	111	115
Wax, bees' ..bls &						
gns	804	472	903	260	625	387
cks & cs	1,154	1,751	2,457	2,096	2,370	2,722
cakes	9	3	204	24	105	—
Japan, vg. pkgs	1,105	1,501	615	1,700	961	1,108

* Present stock in Liverpool of Para 856 tons, other sorts 420 tons—total 1,276 tons, compared with 1,080 tons in 1888 and 1,725 tons in 1887.

† Stocks of anise and cassia oils lying at Smith's Wharf and Brewer's Quay are not included in this return.

Metropolitan Reports.

CITY RENTS.—The *Warehousemen* understands that Messrs. Nicholson & Co., the drapers, have paid the executors of the late Mr. Crispe, 2,000*l.* for a six-years' lease, at 500*l.* a year, of the shop facing Cheapside, carried on so long as a chemist's, under the style of Butler & Crispe.

POISONED BY A CHINESE CRACKER.—An inquest was held on Tuesday, at Southwark, on the body of a boy named Charles Curry, of Brisbane Street, Camberwell. He was poisoned by sucking a Chinese cracker which another boy told him was a sugar-stick. The jury returned a verdict of "Accidental death."

A SYNDICATE OF WHOLESALE DRUGGISTS contemplates, it is rumoured, buying a large number of the small retail drug shops in the working-class localities in the metropolis, with the view of trading on the limited liability principle. It is believed that the results will justify the expenditure of the considerable amount of capital which, it is said, is forthcoming.

WESTMINSTER COLLEGE PRIZE LIST.—At the distribution of prizes last week in connection with this institution the following were the medallists:—*Senior Chemistry*—Silver medals: J. Barker, C. Goode, G. F. Westlake; bronze medals: Ed. Saville, J. T. Bayliff, F. Jacks. *Junior Chemistry*.—Medals: R. M. Hearne, J. Ellis, J. F. Hewitt. *Materia Medica*.—Medals: A. W. Nunn, D. C. Rees, J. Grieve. *Botany*.—Medals: W. C. Sayers, R. G. Hook, W. T. Frost. *Dispensing*.—Medals: W. H. Bate, F. W. Wrench, J. B. Wilcox. There were besides fifty-six certificates presented.

A CHEMIST'S PROFITS.—On Thursday, October 3, the case of *Brand v. Fernando* came before his Honour Judge Bayley in the Westminster County Court. The defendant offered to pay 1*l.* a month, but the plaintiff thought he could pay more, as he had a good chemist's business in Victoria Street, S.W. The defendant said he was a chemist, and his takings were from 7*l.* to 8*l.* a week, and the profits about 2*l.* a week. He carried on the business with the assistance of his wife. He could not pay more than 1*l.* a month. The plaintiff consenting to take the amount, his Honour made an order for the payment of 1*l.* per month.

ALMOST STARVING.—On Tuesday, in the Westminster County Court, the case of the London and Westminster Loan and Discount Company *v.* Cockerton was disposed of by his Honour Judge Bayley. Defendant was described as a chemist in a "good neighbourhood." He appeared himself, and said that he had no means of paying the money. He had been out of work for ten months, and he had 26*l.* a year to pay for his house. Mr. Lloyd, on behalf of the plaintiffs: But you have a chemist's shop there, and it is a very good neighbourhood for a chemist's shop. Defendant said it was a very small business, and he was doing practically nothing. Mr. Lloyd: You have no children? Defendant: Yes, I have six children to keep, and I am almost starving. His Honour said upon the defendant's statement he should decline to make any order.

WESTMINSTER COLLEGE PHARMACY CLUB.—A meeting of former and present students of the Westminster College was held on Tuesday evening last for the purpose of forming a club. Mr. Wills was voted to the chair, and, after a few introductory remarks, called upon Mr. Will to explain the project. Mr. Will stated that primarily the club would be for former and present students of the college, to afford a means of scientific and social progress, and to bind closer the students and friends of the college. Mr. Wootton moved the resolution that "The Westminster College Pharmacy Club be formed." This was seconded by Mr. Will, and unanimously agreed to. Mr. Wills was then elected president, Messrs. Will and Gravill vice-presidents, Mr. Wootton hon. treasurer, Mr. Walden, hon. secretary, and the following gentlemen members of committee:—Messrs. Bloomfield, Goode, Maxwell, Morrison, Ogle, Sayers, Scott, and Zusan. At the close of the proceedings all present gave in their names for membership. A meeting will be held next week for the enrolment of members.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

BRITISH MEDICAL ASSOCIATION.—It is proposed to invite the British Medical Association to hold its next annual meeting in Birmingham.

THE Preliminary examination was held this Tuesday at the Priory Rooms. Mr. A. Southall presided. There were fourteen candidates, including one lady.

THE house, shop, and laboratories of Mr. T. W. Chapman, chemist, Bristol Road, are to come under the auctioneer's hammer on Thursday, October 24, by order of the trustees of the late owner. Mr. Chapman's lease expires at Christmas next.

BIRMINGHAM AND MIDLAND INSTITUTE.—On Monday night, in the Birmingham Town Hall, Sir Henry Roscoe, M.P., distributed the prizes to the students of the Birmingham and Midland Institute, and delivered his address as president for the year. He intimated that his subject would be "The Life and Work of a Chemist," and his address proved to be a somewhat florid sketch of the scientific career of M. Pasteur.

MEDICINE AND PHARMACY.—The annual gathering of the students of the Queen's College Medical School and their friends took place last Wednesday, when all the professors met in conversazione. Amongst the exhibitors of drugs and recent pharmaceutical novelties were Messrs. Burroughs, Wellcome & Co., London, and P. Harris & Co., Bull Ring. The list of entries of new medical students is very high, and amongst them are several pharmacists. At least two Birmingham pharmacists who have businesses have qualified as medical practitioners during the past session.

BRADFORD.

FALL OF A DRUG-WAREHOUSE RUINS.—A storm of wind and rain swept over Bradford and district on Monday morning last, and considerable apprehension was caused by the fact that the lofty walls of the chemical warehouse of Messrs. Humphries, Vicar Lane, were in a very dangerous condition. The recent fire had completely gutted the premises, the walls alone being left standing, and, as the building was six storeys in height, it was exposed to the full fury of the gale. The inhabitants of neighbouring cottages were in evident peril, but owing to the alertness of the police authorities they were nearly all induced to leave their houses for places of safety before the walls fell, later in the day, completely wrecking the cottages. A few persons, however, were hurt, but not seriously, by the falling débris.

LIVERPOOL.

APPOINTMENT.—Mr. Parsons, son of the late Dr. Parsons, has been appointed dispenser to the Tumour Hospital, Leese Street.

PHARMACEUTICAL STUDENTS' SOCIETY.—The first meeting will be held on Friday, October 18, at 8.30 P.M., in the drawing-room of the Y.M.C.A., Mount Pleasant, when the president and vice-president will be elected for the ensuing session. The remainder of the evening will be of a social character.

MEDICAL INSTITUTE.—At the opening meeting, on October 10, Dr. Carter, president, delivered the inaugural address on, "Illustrations of the Operations of Ferments in Disease." There was also an exhibition of models, instruments, and specimens of brains, &c. New chemical and pharmaceutical preparations were exhibited by Messrs. Burroughs, Wellcome & Co., Clay & Abraham, and Symes & Co.

PRESENTATION TO MR. REGINALD HARRISON.—There was a large gathering of medical men and others at the

Adelphi Hotel on Saturday evening, the chief object of the proceedings being to present a testimonial to Mr. Reginald Harrison, the eminent surgeon of this city, who is about to take up his residence in London. The chair was occupied by Dr. Mitchell Banks, and amongst the 150 guests were representatives of the Medical School, University College, the Royal Infirmary, and the Medical Institute. During the after-dinner proceedings Mr. Harrison was presented with a magnificent punchbowl and goblets, manufactured specially by Messrs. Elkington & Co. The speakers bore cordial testimony to the high value of Dr. Harrison's work in Liverpool, and warm wishes for his success in the metropolis were expressed.

IODINE POISONING.—A patient at one of the Liverpool hospitals last week had the following mixture prescribed for him:—

Potassii iodidi..	..	..	..	gr. 80
Inf. gentiæ ..	..	..	..	3v iij.

One tablespoonful to be taken three times a day.

The bottle was distinctly labelled, but the patient took 1 oz. for a dose, and although this contained only 10 grains iodide of potassium, he began to feel the ill effects of it in the course of a couple of hours, and later showed the well-marked symptoms of a bad case of iodine poisoning—sore throat, swollen tonsils and tongue, discharge at the nostrils, and eyes considerably puffed up; so alarming were the symptoms, in fact, that the medical man sent the mixture for analysis. It was found to have been correctly dispensed, and the patient has nearly recovered. This is an interesting case, as the iodide is often given in doses of 15 or 20 grains without any marked effect, and up to 1 drachm without bad results.

NEWCASTLE-ON-TYNE.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.—Last week marked an important event in the extension of the teaching work of the above school. The senate of the University gives ample proof of its readiness to extend its work of teaching and to confer degrees in most liberal style. The enlargement of the railway station at Newcastle involved the pulling down of the old premises of the School of Medicine, and those responsible for its management made this the occasion for a spirited effort to enlarge the capacities of the institution. An excellent site was secured in Bath Road, and the building erected upon it evoked general admiration from all who used it as the reception-room of the British Association. The new home of medical learning has in its basement story a fine suite of rooms for physiological and microscopical work. The main entrance from Bath Road has a fine hall, leading to board-room, offices, and two large lecture theatres. Above these is a library and museum of ample dimensions; the whole forming a college well worthy of the science and the city. The opening ceremony was performed by the Mayor of Newcastle, in the absence of the venerable Dr. Lake, Dean of Durham. The veteran surgeon, Dr. Heath, president of the College, announced in his speech that 10,000*l.* was required to free the building of debt, and closed his speech by handing to the treasurer a cheque for a thousand guineas. In the evening a conversation was held by way of house-warming.

On October 4 Professor Lawson Tait, of Birmingham, was entertained at dinner by the Northumberland and Durham Medical Society, and he made the important announcement that he was commissioned by the Birmingham School of Medicine to open negotiations for an arrangement by which Durham degrees could be obtained in examinations held at Birmingham. It was suggested that this might be accomplished by an affiliation of the Midland school to that of Newcastle. The suggestion meets with warm approval in this district.

OLDHAM.

"SEQUAH" brought a three weeks' visit to Oldham to a close on Wednesday of last week. There was an immense demonstration. At least 6,000 people were present, whilst hundreds had to go away owing to their inability to get near the place of interest. Sequah began with the tooth-drawing,

but did not give any of the halt or the lame a rubbing down. He afterwards made a neat speech, in which he thanked the people of Oldham and district for the kindness and consideration they had shown. That enthusiastic meeting he would never forget, and he claimed that the clear-headed and thinking people of Oldham would not have met in their thousands to give him a hearty farewell if he had not been the means of curing many of their fellow-citizens and giving relief to thousands. When he first came amongst the Oldham people he promised that he would do certain things, and he claimed he had done all he said to the very letter. After again thanking them for giving him such a splendid farewell Sequah proceeded to business. Hats, satchels, bags, and other like articles were held up in hundreds for the "Indian Oil," "Prairie Flower," and tooth-powder, but, had he served all who were desirous of availing themselves of the medicines, he would have been there until long past midnight, and, to the disappointment of hundreds, he ceased selling shortly after ten o'clock, but not before stating that what he had been selling could be purchased from the chemists. On his way home Sequah was the recipient of an ovation which has not been accorded any person in Oldham for years. It is said he has drawn about 4,000*l.* in Oldham, which means about 20,000 lots, of his oil and "Prairie Flower." Sequah is now in London, where he will begin business in a fortnight. At Christmas he will appear at St. James's Hall, Manchester.

PLYMOUTH.

MESSRS. ROW & Co., chemists, Devonport, have removed from 84 Fore Street to 97 Fore Street.

The Plymouth Drug Company, who call themselves co-operative chemists, have opened premises at 20 Cornwall Street. Mr. W. F. Goodwin, chemist and druggist, formerly of Penzance, is the managing proprietor. They have issued a lengthy retail price-current.

MR. G. T. STARKEY, chemist, of Cobourg Street, is a sergeant in the 2nd Devon (Prince of Wales's) Volunteer Regiment, and its crack shot. Last year he finally won the battalions cup given by Sir Massey Lopes in 1880. On Thursday of last week a new competition for a 25*l.* challenge cup was started, and Sergeant Starkey again came out first among fifty competitors. He has to take the first place two consecutive years or three times in all before finally securing the cup.

WOLVERHAMPTON.

MINERAL-WATER MANUFACTURERS AND THEIR BOTTLES.—Thomas Smith, mineral-water manufacturer, Penn Road, Wolverhampton, was charged, at the county police court, Wolverhampton, on Monday, with using the trade-mark of Messrs. Anderson & Co., aerated-water manufacturers, Wolverhampton. It was pleaded in defence that bottles of various firms sometimes got mixed, and that there was no intent to defraud, or else Mr. Smith would not have put on his own label. Anderson's name was on the bottle in glass letters, but Smith's label was affixed. The information was laid by John H. Poole, of Woodbridge Road, Moseley, inspector to the Birmingham and District Mineral-water Trade Protection Association (Limited). Mr. Kettle prosecuted, and Mr. Wilcock defended. Mr. H. T. Davenport, M.P., one of the magistrates, said the bench did not think there was sufficient proof that defendant, when he used the bottles with his label affixed, intended to deceive the purchaser and to lead him to believe that the soda-water was of Anderson's make and not his own. At the same time they felt that manufacturers ought to secure some better protection than they at present possessed, and the magistrates hoped the prosecutor would call attention to this need. The summons was dismissed.

IRELAND.

DURING the present season the Irish blackberry crop has been unusually abundant, large quantities being shipped daily from Belfast for England and Scotland.

The vacancy at Jervis Street Hospital, caused by the appointment of Mr. Connellan to be dispensary officer at Ballyfarnon, has been filled by Dr. Hughes, Duhlin.

OCTOBER PHARMACEUTICAL LICENCE EXAMINATIONS.—Passed candidates, Messrs. Albert Edward O'Connell, Charles Marshall, and William Hanna.

LAST week at Cork the premises of Mr. Waters, drug, oil, and colour merchant, Winthrop Street, were destroyed by a conflagration which originated at a neighbouring ironmongery store. Mr. Waters' house and stock are covered by insurance.

A WELL-KNOWN south county chemist and druggist, inspired with patriotic zeal against the "toirant Saxon," has signified his refusal to comply with future orders for goods required by the local constabulary.

THE Board of Guardians of the Clogher Union notify that they will on Saturday, October 19, appoint a contractor for a twelve months' supply of medicines. Tenders to be received beforehand.

THE registrar of the R.C.S.I. notifies that an election will be held on October 23 for professors of chemistry, zoology and botany, and pharmacy. Applications to be lodged with the secretary of the Council not later than Thursday, October 20.

THE Belfast medical officer of health reports that an alarming increase of enteric fever has taken place within the past few days, no less than 156 cases having been reported among dispensary patients during the past four weeks, against 73 recorded for the previous month.

CURIOUS EXPLANATION OF A FIRE.—Last week at Belfast the premises of Messrs. J. Cochrane & Co., blue manufacturers and drug merchants, were damaged considerably by fire, supposed to have been caused by mice eating phosphorus from the tops of lucifer matches. The loss is covered by insurance.

AT Dublin, last week, a druggist's assistant named Power was charged with having assaulted a painter named Elliott, of Portobello, by striking him on the head with a blackthorn stick, cutting the complainant so severely that he had to be removed to hospital. The prisoner was ordered to pay 5*l.* compensation.

AT the Limerick Police Court last week a young man named Robert J. Gubbins, employed as an assistant by Messrs. J. P. Evans & Co., druggists and colour merchants, was charged with having embezzled various sums of money, the property of his employers. The prisoner, who strongly protested his innocence, was remanded for eight days, bail being refused.

A BANKRUPT APOTHECARY.—At Belfast Bankruptcy Court last week, before Mr. Henry Fitzgibbon, Q.C., the first public sitting in the case of William Hanbury, who traded under the title of Wheeler & Whitaker, apothecaries and druggists, High Street, was held. Dr. Macauley represented the bankrupt, and Mr. McCartan, M.P., appeared on behalf of a number of creditors. On the application of Mr. McCartan, Mr. Henry, York Street, was appointed creditors' assignee. Dr. Macauley applied to his Honour to have a sum of 30*l.* given out of the estate to the bankrupt. After some discussion his Honour made a grant of 10*l.* The Court directed the bankrupt's premises to be offered for private sale, the tenders to be submitted to the official assignee.

SCOTLAND.

ABERDEEN.

MR. A. M. SHEPHERD has removed from 44 Thistle Street to more central premises at the corner of Rose Street.

NEW BRUSHES SWEEP CLEAN.—A zealous and active young officer of the Excise has lately been stationed here. He is putting in force the Act of George IV. compelling holders of methylated spirit licences and dealers in tobacco, &c., to indicate the same above their main entrance.

DUNDEE.

A TOOTHACHE JELLY has been the cause of dispute between the Inland Revenue authorities and a local chemist. The latter was determined to fight rather than pay a modified fine of 4*l.*, and then the board agreed to accept 2*l.*, which has been paid.

HOW IS MORPHIA MADE?—This was the question asked of

the representative of a well-known metropolitan house. The reply somewhat alarmed the questioner. It was:—"Oh, it is quite easy; they just powder the opium and sift the morphia out of it."

THE ASSISTANTS' ASSOCIATION.—The committee met on Monday evening to arrange about the prizes to be given during the winter. It was decided that in connection with the prize essay on "Progress in Pharmacy," along with Burroughs, Wellcome & Co.'s prize of Remington's "Practice of Pharmacy," the association will give a second prize of books to the value of 10*s.* 6*d.* for the next best paper; also that they are to offer the prizes of books to apprentices only for the best short essay on a given subject. It is also intended to offer three other prizes later on in the session. The next meeting of the association will be held on October 17, when a paper on "Sodium and its Salts" will be read by Mr. J. B. Mason. Mr. James Anderson, chemist, Commercial Street, has intimated his intention to present the Assistants' Association with a microscope.

EDINBURGH.

THE October examinations begin next week. There are, we hear, over fifty candidates for the Minor, two for the Major, and one for the Modified.

THE executive of the Assistants' Association are actively engaged in getting ready their syllabus for the approaching session. So far they have secured a nice selection of papers.

PROFESSOR FRASER will not be able to deliver the opening address to the N. B. Branch till after the second week in November—the 20th is a probable date.

GLASGOW.

EFFERVESCENT DRINKS.—On Monday last Mrs. Crannie and her two daughters, of Nicholas Street, Glasgow, were poisoned by drinking an effervescent mixture which one of the daughters had obtained from a friend. The powder used in the beverage was labelled "tartaric acid," and had been found amongst some waste paper. The sufferers were at once removed to the hospital in a state of collapse, due to excessive vomiting and purging, but they are now recovering. The case, which came under the cognisance of the southern police officials, has been reported to the Procurator-Fiscal, who is making inquiries into it.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

THE PARIS HOMŒOPATHIC HOSPITAL.—Hôpital Saint-Jacques by name—situated at 227 Rue de Vaugirard, has been left a 500,000*f.* legacy by Mlle. Vinet, and obtained legal permission to accept the same.

FOREIGN PREPARATIONS.—In conformity with the Paris College of Pharmacy's report, the Ministers of Finance and of Commerce have ordered that henceforth *sulphonal* and *phenacetin* shall be allowed to be imported freely, on paying a duty of 5 per cent. *ad valorem*. But the preparations thereof—namely, Fried. Bayer & Co.'s (Eberfeld) pastilles—are to be prohibited. In the same way, Dr. De Vrij's extract of cinchona may be admitted, on payment of a duty of 1.40*f.* a kilog. But bovril is not to be imported.

FUCUSOL A NONENTITY.—M. Maquenne, after investigating the nature of the volatile products obtained on distilling seaweeds with water and sulphuric acid, has come to the conclusion that the fucusol reported by some chemists to be therein contained has no existence as a distinct principle. On repeating the process with some 80 kilogs of seaweeds, he was enabled to secure about 800 grammes of the supposed alcohol, and ascertain it to consist of a mixture of furfural and methyl-furfural. He therefore proposes to drop the name of fucusol from the list of alcohols. Such is the substance of a memoir presented on October 7 to the Academy of Sciences.

SAFE TRANSPORTATION OF GUN-COTTON.—The Pharmacie Centrale managers have given notice to their customers, retail pharmacists, that henceforth all gun-cotton supplied

on orders shall be dampened with its weight of water, and packed in glass. Moreover pharmacists are advised to thus keep it in stock, and when the article is needed for use to take out the quantity desired and to dry it by pressing in filter paper and exposing to open air. The foregoing precautions are taken to guard against explosion through sudden shock and breakage of the glass containers. Moreover pharmacists are reminded that fire insurance companies are not liable for any damage done by explosive compounds, but only for the fire ensuing.

MME. MARIE HUOT last Tuesday indulged in a manifestation at the Academy of Medicine. Dr. Laborde, to demonstrate the erroneousness of certain conclusions about the comparative toxic properties of anise seed and wormwood oils, was proceeding to illustrate his observations by injecting the oils into live guinea-pigs, when Mme. Huot vehemently protested, and raised such a disturbance that two ushers were sent to courteously request her to leave, which she did with the honours of war. The notorious antivivisectionist has, however, on this occasion the sympathy of many of her usual opponents, as a public sitting of the Academy of Medicine, which every passer-by is at liberty to attend, is hardly a proper place for torturing living creatures.

A CONGRESS ENDS IN SMOKE.—The fourth annual meeting of French surgeons was held on October 7 in the Faculty of Medicine's grand amphitheatre, and organised with Dr. Caron Larry as president; Dr. F. Guyon, vice-president; and Dr. J. Pozzi as secretary. Many foreign surgeons were in attendance, among whom was Dr. Th. Longmore, a delegate from the British War Office. On the first day proceedings went on smoothly according to programme; but on the second, Tuesday, 8th, just as the morning sitting was nearly over, dense smoke and flames issued from under the officers' table. The amphitheatre was soon vacated, and firemen called in. After twenty minutes' efforts the fire was subdued before it could reach the buildings, but not before it had done considerable damage. The fire originated in exactly the same place, and from the same cause—a defective heater—as another which occurred some eighteen months ago. This time the material damage done is estimated at from 50,000 to 100,000*fr.*, and all the valuable paintings spared by the former calamity have been entirely destroyed. Among them was the celebrated picture of Ambroise Paré using the red-hot iron for the first time on the battlefield. The good old surgeon who would tell his patients, "I dressed your wound, God cured it" (*Je te pansai, Dieu te guarit*), was an appropriate figure for a surgical congress. But the meeting was not to be disbanded for so small a matter as a hall destroyed. The congress completed its sessions in the unfinished Ecole Pratique across the way, and as far as rooms were concerned did not lose by the change, as the new hall is a much finer amphitheatre, almost twice as large and better in every respect. It has hitherto been unused and jealously guarded from public gaze, and was now thrown open for the first time. After the new Sorbonne amphitheatre it is the finest and largest in Paris.

GERMAN PHARMACEUTICAL NEWS.

(From our Berlin Correspondent.)

CARBOLIC ACID AND POTASSIUM CHLORATE. — The medical profession of Berlin are taking steps to have these bodies scheduled, so as to prevent their purchase except on the order of a medical man.

SALOL is eulogised by Dr. Grätzer, who obtained such good results with it that he has entirely discarded iodoform for it for dusting the surfaces of ulcers of all kinds and diseases of the skin. He used a powder consisting of 1 drachm of salol and 1 oz. of powdered starch. He says that it is an excellent antiseptic.

THE EFFECT OF SEVEN DOCTORS. — Some Dresden medical men have received an unsolicited testimonial which is perhaps more true than welcome. Two gentlemen have published in the newspapers their grateful appreciation of the endeavours of seven different doctors in Dresden, whose

names and addresses are given in full, to cure their late mother, endeavours strenuous, but, alas! unsuccessful.

THE TENTH INTERNATIONAL MEDICAL CONGRESS is to take place at Berlin from August 4 to 10 of next year. All notices will be printed in German, English, and French. Professor Liebreich is to preside over the pharmacological section. It has been decided that not more than 20 minutes shall be allowed for the reading of any contribution, and in discussions ten minutes is the limit allowed to each speaker. The Reichstag will be asked for a grant of 4,000*fr.* towards the expenses.

COFFEE'S TURN NOW.—In the Berlin *Clin. Wochens.* Dr. Wendel calls attention to the injurious effect of the continued use of coffee. He states that it is quite erroneous to suppose coffee is harmless, as, after being taken for a lengthened period, it produces a special disease. In consequence of its physiological action, Dr. Wendel thinks that coffee should be absolutely interdicted in all febrile diseases, such as typhoid, tuberculosis, &c.; also in diseases of the brain and spinal cord, in anæmia, chlorosis, &c. The symptoms caused by excessive coffee-drinking are as characteristic as those of morphinism and alcoholism.

EXISTING PHARMACOPEIAS.—At the Scientists' Congress at Heidelberg, Vulpius gave some interesting details concerning the various existing Pharmacopœias. Twenty Pharmacopœias are now in use, supplements, &c., bringing the total to about forty volumes. The French Codex contains the greatest quantity of subjects, viz. 2,039, and the Norwegian Pharmacopœia the least, 519. In the French there are no fewer than 106 syrups, while the German has but 20, and the Norwegian only 9. England is the only country that still retains the old system of weights, all the others using the decimal system. The number of preparations found in one Pharmacopœia only amounts to 2,037, while 150 are included in all.

STRIKES appear to be the order of the day, and, though the chemists' assistants have not yet actually struck, there is an extensive movement amongst them for a decrease in the hours of labour. The Chemists' Assistants' Association ("Der Pharmaceuverein") has sent notices to all proprietors of pharmaceutical businesses asking for shorter hours, and much discussion has arisen as to whether they are or are not overworked, the *Pharm. Zeit.* printing whole pages of opinions on the subject. The hours at present are from 6 or 7 in the morning till 10 at night, an hour being allowed for the mid-day meal. The assistants ask that the hours shall be from 8 A.M. to 9 P.M., with two hours off at mid-day, and that assistants taking night duty shall be allowed two hours next morning. Their demands are still unsettled.

SOMNAL, A NEW SOPORIFIC.—A Berlin firm of manufacturing chemists are bringing out a new soporific to which they have given the name of "Somnal," and which is described as an ethylised combination of urethane and chloral. It is prepared from chloral, alcohol, and urethane, and answers to the formula $C_6H_{12}Cl_3O_3N$, thus differing from the chloral-urethane, hitherto used, by the addition of two atoms of carbon and four atoms of hydrogen. Somnal has a melting-point of 40° C. and boils in vacuo at about 145° C. It is not influenced by the addition of nitrate of silver, nor by the action of acids. It is administered in doses of 30 grains, preferably with liquid extract of liquorice, or with syrup of raspberry, as follows:—

Somnal	3iiss.
Aq. destill., ad	3iij.
Ext. glycyrrhiz. liq.	5v.

One tablespoonful at night.

Such a 30-grain dose of somnal is said to create within half an hour of its administration a sound sleep of six to eight hours' duration, and without any injurious by or after effect. It is claimed for somnal that it does not affect the digestion, the breathing, or the temperature of the body, and that it possesses all the advantages of urethane and chloral hydrate, without any of their ill-effects.

THERE is in Louisville, U.S.A., a school of pharmacy for women.

Pharmaceutical Society of Great Britain.

PRELIMINARY EXAMINATION.

THE following are the questions which were given at the examination held on October 8:—

LATIN.

(Time allowed—from 11 A.M. to 12.30 P.M.)

I. For all candidates. Translate into Latin:—

1. The army of Ariovistus, the King of the Germans, had conquered the Gauls.
2. He will do it if he is able.
3. No animal is more faithful to man than the dog.
4. The name of Brutus was given to the youth.
5. At what price did you buy the bread? For a small sum.

II. Translate into English either A. (Caesar) or B. (Virgil).

(Candidates must not attempt both Authors.)

A. CAESAR.

1. Quum ea ita sint, tamen, si obsides ab iis sibi dentur, nti ea, quae polliceantur, facturos intelligat, et si Aeduis de injuriis, quas ipsis sociisque eorum intulerint, item si Allobrogibus satisfaciant, sese cum iis pacem esse facturum. Divico respondit: Ita Helvetios a majoribus suis institutos esse, uti obsides accipere, non dare, consueverint; ejus rei Populum Romanum esse testem. Hoc responso dato, discessit.

2. Id ne accideret, magno opere sibi praecaveudum Caesar existimabat; namque omnium rerum, quae ad bellum nuni crant, summa erat in eo oppido facultas; idque natura loci sic muniebatur, ut magnam ad ducendum bellum daret facultatem, propterea quod flumen Dubis, ut circine circumductum, paene totum oppidum cingit, reliquum spatium, quod est non amplius pedum sexcentorum, qua flumen intermittit, mons continet magna altitudine, ita ut radices ejus montis ex utraque parte ripae fluminis contingant.

Grammatical Questions.—For those only who take Caesar.

1. Decline in full—*omnium rerum, summa facultas, ejus montis* (Par. 2).
2. Write in full the indicative present and subjunctive pluperfect of the verbs in italics (Par. 1).
3. Write down the comparative and superlative degrees of *liber, gracilis, multus, parvus*.
4. Write in Latin—12, 37, 18th, 76th, six each, fifteen each, twice, seven times.

B. VIRGIL.

1. Parce metu, Cytherea; manent immota tuorum
Fata tibi; cerues urbem et promissa Lavini
Moenia, sublimemque feres ad sidera ceceli
Magna iunximus Aeneam; neque me sententia vertit.
Hic tibi labor enim, quando haec te cura remordet,
Longius et volvens fatorum arcana movebo—
Bellum ingens geret Italia, populosque feroces
Contundet, moresque viris et moenia ponet,
Tertia dum Latia regnantem viderit aestas,
Ternaque transierint Rutulis hiberna subactis.
2. Necnon et vario uocem sermone trahebat
Infelix Dido, longumque bibebat amorem,
Multa super Priamo rogans, super Hectora multa;
Nunc, quibus Aurorae venisset filius armis;
Nunc, quales Diomedes equi; nunc, quantus Achilles.
Immo age, et a prima die, hospes, origine nobis
Insidias, inquit, Dauaum, casusque tuorum,
Erroresque tuos; nam te jam septima portat
Omnibus errantem terris et fluctibus aestas.

Grammatical Questions.—For those only who take Virgil.

1. Decline in full—*haec cura, populos feroces, bellum ingens* (Par. 1).
2. Write in full the indicative present and subjunctive pluperfect of the verbs in italics (Par. 2).
3. Write down the comparative and superlative degrees of *liber, gracilis, multus, parrus*.
4. Write in Latin—12, 37, 18th, 76th, six each, fifteen each, twice, seven times.

ARITHMETIC.

(Time allowed—from 12.30 P.M. to 2 P.M.)

[The working of these questions, as well as the answers, must be written out in full.]

1. Multiply 5 oz. 2 scr. 10 gr. by 1069.
2. How long will it take to walk round a square field containing 13 acres 81 yards, at the rate of $3\frac{1}{4}$ miles an hour?
3. What fraction of $\frac{2}{3}$ of 10s. 6d. is $\frac{1}{5}$ of $\frac{3}{4}$ of 6s. 5d.?
4. Reduce $\frac{7}{15}$ of 10l. 6s. 7 $\frac{1}{4}$ d. to the decimal of .015l.
5. How many yards of paper 1.416 feet broad will be required for a room 13.3 feet high, 15.5 feet long, and 7.16 feet broad?
6. If a man walks $4\frac{1}{2}$ miles in 72 minutes, how many metres does he walk in 1 hour?
7. A bankrupt paid 10s. 6d. in the pound. He owed 575l. 10s. to two persons, one of whom received 147l. How much did he owe the other?

ENGLISH.

(Time allowed—from 3 P.M. to 4.30 P.M.)

[Read carefully the following passage before answering questions 1, 2, and 3 which refer to it.]

Alas! regardless of their doom,
The little victims play!
No sense have they of ills to come,
Nor care beyond to-day.
Yet see how all around them wait
The ministers of human fate,
And black Misfortune's taleful train!
Ah, show them where in ambush stand,
To seize their prey, the murderous band!
Ah, tell them they are men.

1. Parse fully the words *alas, regardless, beyond, show, where, their*.
2. Name the subjects, and where possible the objects, of the verbs *play, have, wait, show, stand*.
3. Write out a list of all the adjectives, and where possible give their degrees of comparison.
4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where requisite:—is Mrs Varden at home said Mr Chester sir returned sim eyeing him over with a look of concentrated expression she is did you wish to see her Mr Chester nodded then come this way sir said sim wiping his face upon his apron follow me sir would you permit me to whisper in your ear one half a second by all means.
- *5. Give a short biography of some eminent English statesman or soldier of the eighteenth century, or an outline of one of Shakespeare's plays.

DUNDEE CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

INAUGURAL ADDRESS BY MR. WILLIAM GILMOUR,

Chairman of the Executive of the North British Branch of the Pharmaceutical Society.

THE inaugural address in connection with the first session of the Association was delivered in Speed's Hall, Commercial Street, on Thursday evening, October 3, by Mr. William Gilmour, F.R.S.E., chairman of the Scottish Executive of the Pharmaceutical Society. There was a large turn-out of masters, assistants, and apprentices, about 130 being present. Ex-Bailie Doig, one of the honorary vice-presidents, occupied the chair, and amongst others present were—Messrs J. Rutherford Hill, Ainslie, and W. Gilmour, Jun., Edinburgh; Nasmyth, Arbroath; Whitelaw, Perth; A. B. Anderson, J. Cummings, J. L. Doig, D. H. Ferrier, J. Gray, J. M. Hardie, C. Kerr, D. Mackay, J. McMillan, J. B. Mason, Jno. W. Russell, and Frank W. Young, F.R.S.E., Dundee; T. S. Peebles and J. H. Thomson, Lochce, &c. After a short but eloquent address from the chairman,

* This must be attempted by every Candidate.

Mr. GILMOUR, who was received with hearty applause, was called upon. He said: Gentlemen,—It is not my intention to take up your time with any lengthened apology for appearing before you this evening. There are some duties which press in upon one in their official or semi-official capacity which would probably never be undertaken in one's private individuality, and the duty of giving an inaugural address is, I think, one of them. However, I did feel when I received the invitation from your secretary, Mr. Henderson, that some recognition was due to the enterprise and energy which, against many adverse circumstances, had successfully floated your association, and while entirely ignoring my own individuality, I resolved to come north and give you my heartiest sympathy, as well as the little influence which my presence amongst you was calculated to afford.

Now, gentlemen, I intend to-night not to give you any elaborate address, but rather to have a plain, simple, practical talk with you. In my experience, many inaugural addresses, as well as closing addresses, partake too much of the sermonising element—the “let us be up and doing” style, which certainly does for a time excite the feelings, but which produces but evanescent effects, being very much like the morning cloud and early dew. I would rather to-night seek to talk to you for a short time in the plainest of language a little about your association, a little about yourselves, a good deal about your profession, touching also upon the question of education, and finishing up, for appearance's sake, with the orthodox “finally” and “in conclusion.” In carrying out this programme you will, I hope, quite understand that I will endeavour to ignore the personal pronoun, and yet you may trace in my remarks—or, rather, as I should say, in my talk—very much of my own life and experience.

Is this not, after all, the best experience I could give you young men entering upon your career? I have been a student all my life, and I hope I will continue a student until the receptive faculties fail me—and whether from the living lips or inspired book do we not all, in the highest sense, remain students to the end of the chapter? It is, then, in this sense—namely, that of a student—that I would like you first of all to approach and undertake the work of your association. No one has, and no one ever can reach perfection, whatever his calling may be; but we can all aim at perfection, and the higher our standard the higher will be our results, and every endeavour will be something gained, leaving us on a higher platform than before.

THE GOOD AND BAD OF ASSOCIATIONS.

Now I confess that I am at this point very much tempted to sermonise regarding this higher platform and all that sort of thing, as it is rather a favourite subject of mine; but I think my better plan will be to reserve this for the application if I ever get to that point. You assistants and apprentices have certainly reached a higher platform—not the highest, by any means, but one higher than you have ever reached before—in combining and forming yourselves into an association for mutual improvement and edification. I know of no means better calculated to ballast and educate young men than such an association. I purposely say “ballast and educate,” for I believe that there is not a young man who does not recognise that the theatre, the beer-saloon, the billiard-room, or the racecourse are incompatible with the steady, educating force which emanates from such associations. I cannot point to a better illustration of what I mean than to the influence which the Edinburgh Assistants' and Apprentices' Association has exerted on the young men there. Never have I known a superior class of young men—either morally, intellectually, and I think I might add physically—than is now to be found in Edinburgh; and this I ascribe in a great degree to the association which has flourished there for so many years. The reason is obvious. A healthy *esprit de corps* is engendered, the young men get to know and respect each other, friendships are formed, information is given and received, and, above all, a centre is formed which draws and retains young men with aspirations probably indefinable in their very immaturity, but aspirations which, under the maturing influence of such associations, may develop in the future into any possibility.

Yes; I am glad for the sake of pharmacy and for your own sakes that an association has been formed in such an important centre as Dundee, and in proportion to your

success will be the pleasure that I was present at the inauguration of its first session. Let me for a moment refer to one or two little points—little, but not unimportant, because they may make or mar your association. One is ever to remember that you are gentlemen—gentlemen in the true sense of the word, namely, in that you are ever kind and courteous to one another, and to everyone with whom you associate. Young blood is hot and hasty, and the temptation may often be very strong to say a smart thing, or pass a severe criticism upon a weak brother. I hope you will not misunderstand me. I believe in calling a spade a spade, and not in calling it by the more euphonious title of an agricultural instrument, and I also believe that an honest, straightforward criticism will always do good and not harm. At the same time I have observed that more associations are ruined or crippled by the attempts of members to pass smart criticisms and clever comments on the papers of their brother members than from any other cause. Whenever anyone differs from you, and especially if your feelings are very high, you are apt to style him a fool, or, in more vulgar language still, an ass. This is not gentlemanly, nor is it true. This is not calling a spade a spade. It is simply stigmatising your friend, or who should be your friend, and attempting to bring him into ridicule, and, quite naturally, suspicions, jealousies, evil-speaking, and all other angry passions rise. The world is wide enough for all opinions, and one of the first lessons, and most important, which we have to learn in our younger years is to be tolerant—that is to say, gentlemanly—regarding our fellow-men's opinions. Be just then in all your criticisms, leaning to mercy's side, and remembering that some timid, shrinking spirit may for ever, or at least for long, be extinguished under the lash of your severe sarcasm.

HOW AND WHAT TO INVESTIGATE.

Another point in connection with your association is that you must all be workers. Drones are, to say the least, drags upon an association. They add, no doubt, to its numbers, but not to its strength. Every member should endeavour to contribute his mite to the general good of the association. You may do this in two ways: by contributing short practical papers upon what you observe or upon what you discover in your daily work, or by short pointed observations on the papers read. Regarding the first of these methods, I have often been asked, “What can we investigate or write upon?” My young friend, there is not a single subject in pharmacy upon which you may not experiment and discover something new. Take the commonest subject you can think of. Take an ounce of Epsom salts or a pennyworth of sulphur, and investigate them in all their chemical, physical, and even medicinal, properties, and I will be bound to say that you will be astonished at the undeveloped potentialities which lie even in these commonplace substances. There is scarcely a mixture which you make up, or an operation which you perform, or a substance which you handle, that does not contain some unknown factor in its physical, chemical, or medicinal futurity. Herein lies, I think, one of the greatest features of our profession, and one which distinguishes it from all others, and makes even the most commonplace operations interesting.

There is practically no end to the variety and scope of our investigations and operations. In connection with this, keep in mind that a short, concise, practical paper upon an everyday subject is infinitely better than the most elaborate essay. You may get applause for the last, but it will be the applause of a fagged out, wearied meeting, glad in the fact that you have finished. For the former you will get hearty thanks, and probably inaugurate an interesting debate. In debate I would not advocate talking for talking's sake. There are some men who can talk on for ever, and from whom words flow as water from a sieve. What is required is that your ideas be focussed into clear, pithy language, and this can only be done after much experience. When a very little boy I remember frequently having occasion to go into a certain agent's office, on the walls of which was suspended, in a conspicuous position, the following legend, which, I daresay, would nowadays be considered more pithy than polite:—“Notice. This office is conducted on business principles; you are, therefore, requested to do your business in business hours, and when you have done your business go about your business, and leave business men

to do their business." This is always associated in my mind with the advice which a shrewd old minister once gave to a young co-presbyter: "John, tak' my advice, and never rise to speak unless when you have got something to say, and when you have said it sit down." Life is too short and earnest to admit of spending much of it in hearing rippling or frothy speeches; but because of this I would advise every one of you to take part in any debates or criticisms going on from time to time in your association. You may wonder at my dwelling on a point seemingly so small, but by-and-by, if you rise to any public position, as I hope all of you will, as prominent members of the Pharmaceutical Society—not to speak of other societies—you will never regret having learned the art of expressing your thoughts fluently and concisely. I know of no greater acquirement for influencing men and leading men than that of being able to express your opinions in elegant, powerful, finished sentences, and, depend upon it, this is a power which is never, or at least seldom, acquired on the inspiration of a moment. It is generally the result of long, painful experiences; but were these experiences never so painful to you, I would still advise you to go through them.

OBSERVATION AND THE EXAMINATIONS.

Turning to one or two points of a personal character, let me press upon you first the necessity for constant and intelligent observation and reflection. You remember the words which "John Brown" put into the lips of the painter when he was asked how he mixed his paints. "With brains, sir." Well, I know of no single operation which you can perform, or substance you can handle, where the brains are not required. To cultivate the habit of observation and reflection I put in the forefront of our self-education. I say "self-education" purposely, because we may read books and attend lectures, and spend any amount of time and money in acquiring education, and yet fail miserably if we have not cultivated this habit. I press this the more strongly upon you, as I find after long experience that it is the weakest point in the education, as it also is in the examination, of our young men. Probably as many young students fail when they enter the examination room through the want of cultivating these habits as from any other cause. These gifts of observation and reflection can no more be acquired by inspiration than others of which I have spoken. It must be a habit, and we can best cultivate them by noting the why and wherefore of every combination, reaction, and test given in the text-books, as well as the changes and reactions which occur in our everyday experiences. No reaction or unexpected change in any mixture or compound should ever be passed over without a note being taken of it, and afterwards examined. You may probably think I am making too much of this point, but as a matter of fact it is one of the weakest spots in every candidate who enters the examination rooms.

How many hundreds, I might even say thousands, of cases I could give you from my own personal experience! I would not for the world hurt the susceptibilities of any young man presenting himself for examination, and therefore my remarks must be considered very general; but I would like to give you one or two cases in point, and they are so common that no one can possibly take offence. How few, for example, have any knowledge of crystallography, so as at once to identify such well-defined crystals as borax, alum, tartaric acid, citric acid, iodide of potassium, chlorate of potassium, and twenty others which I might mention, from their external physical characteristics. And yet this should be as much a part of your training as distinguishing false from true aconite. Again, I should say that about half of the young men when testing begin with the flame test. Probably they are taught to do this to discover the sodium, potassium, or lithium flame; but in doing this the majority will fail to detect the other significant reactions which are going on. The charring, the volatilisation, the deflagration, the colour changes in many non-volatile salts and other reactions are ignored, simply by reason of their not being mentioned in the charts. It is by the chart they go, and by the chart they strictly abide, and so they flounder on, probably in the end failing to find what they should have discovered in the initial process of their investigation.

Again, I am not in the least exaggerating when I say that the fact has almost become notorious that scarcely a young

man who presents himself for examination has even an elementary knowledge of physics. It has become a common question with the Government visitor at our examinations, "Have you come across that candidate yet who knows his physics? for if you do I want to see him." No doubt the lack in this department is due to a great extent to our educational system, and I therefore would not be too hard on the subject; but surely the construction and principle upon which the barometer, thermometer, and specific gravity bottle depend should be understood by every candidate, seeing these enter so largely into all our operations.

HOBBIES AND BOOKS.

Turning to another point, I believe in young men having a hobby—at least, so long as it is an honest hobby. Of course we should all endeavour theoretically to be all-round men; but then even all-round men have their irregularities, and I daresay we like them all the better because of these irregularities, as it makes them all the more human by giving them individuality. I believe in hobbies, because I know that if a young man has one he will almost certainly excel in that subject above his fellows; because I believe in the truth of the "old Watts" hymn that "Satan finds some mischief still for idle hands to do." I believe in them above all as from my life experience I can testify that not a young man who has devoted his whole energy to any department of study or investigation has ever gone wrong or failed in the battle of life. It is one of the saddest thoughts of my life to find when I look around me how many who began life with me have fallen simply through the want of some absorbing influence which could carry them out of their grosser nature. One man's hobby is *materia medica*, another's is pharmacy, another's chemistry, while a fourth may think that botany excels all subjects. Such young men will soon be looked up to as authorities, and thus an educating process will go on, second only in importance to that of a well-trained class. I knew a young lad, a young, obtuse-looking youth, whose hobby was—snakes! You should have seen how the face of that lad brightened up when his favourite subject was touched upon. It literally glowed with enthusiasm as he told you the history of every snake in his possession, and its habits; and when I met him I was never sure but that he would produce a snake out of each pocket to gratify me. Depend upon it that lad was a born naturalist, and I could not help respecting him from the simple fact that he knew so much more than I did on his special hobby. Closely connected with this is another point, and this is probably a hobby of mine. Young assistants and apprentices have not as a rule much money to come and go upon, but what they really have they are very apt to part with; and what they do part with it is much better should be diverted into a proper channel. Well, I know of no better investment than books. Good books of every kind, but especially books of reference, are about the safest investment, next to the National Savings Bank, which young men can make. Satan finds a lot of mischief, not only for idle hands, but for too full purses also; and I can scarcely believe that a well-filled bookcase and an empty purse are in any way compatible with the theatre, beer-saloon, or other grovelling amusements of that kind. I remember when, possibly like some of you before me to-night, I had to look at both sides of a shilling before parting with it; and yet few pleasures have been so keen in my life as that when I first invested in a few works of reference. Not one of those books, I can safely say, but has literally returned me forty, and even a hundredfold; while no one can tell from what temptations I have been kept, both by the companionship which they gave me, and the empty purse which they occasioned me.

AN ASSISTANT WHO HAS RISEN.

In Newcastle lately I took the opportunity of seeing through one of the largest chemical works on the Tyne, and my first impression was one of deep depression at the littleness of everything pharmaceutical. All the operations were conducted on so large a scale that they sunk into perfect insignificance our petty operations. Here were hundreds of tons of carbonate of soda in process of crystallisation, in another department as many tons of lime in process of chlorination, while hydrochloric acid was flowing constantly night and day in a large stream to the reservoir, and yet the utmost order, purity, and pre-

cision prevailed. Passing the chlorinating chambers, for example, there was not the faintest smell of free chlorine, and in all the departments I noticed also large test-tubes attached to chambers in the chimney walls, through which the different gases passing up the chimney might pass, and thus waste be detected and checked. I remarked upon these features to the chemist who was conducting us through the works, and his reply was significant. He said when a company can pay dividends to the extent of 15 to 20 per cent. to their shareholders they do not require to be careful of waste, but when dividends fall to 3 or 5 per cent. it is the waste that pays. I have often thought of this remark within the last few days. It is the waste in all our lives that pays in the end—the waste moments, the waste pence, the waste strength, and books of reference in many of our difficulties will help us and save many an hour's, and even many a day's, investigation. There are not many lives which yield a dividend of 15 or 20 per cent., they are all made up of small detail, and in the end these small details pay, and so with these reflections I came back to pharmaceutical life once more comforted. The chemist who conducted us through the works, who is now one of the managing partners in the concern, who has eight or ten chemists under him, and some seventy or eighty different foremen of departments to look after, was once a chemist and druggist's assistant. He came to Edinburgh as a turn-over apprentice, and was asked the composition of hydrochloric acid, and knowing nothing at all about it, his ignorance cost him that situation. In fact he knew nothing of chemistry whatever, but his very ignorance spurred him on to gain all the knowledge he could, first from books, for he could not then afford lectures, but afterwards from lectures, and now he freely ascribes all his success in life to these three things:—(1) His pharmaceutical training, which taught him the beauty and necessity of minute attention to manipulation; (2) his books, which gave him his first start in chemical training; and (3) the lectures, which gave him his finished training.

THE "FINALLY"—EDUCATION.

Now that I have touched upon books, let me just say one word upon education. I have no intention of entering upon the proposed curriculum scheme. I think it might well form a subject for a good debate at one of the evening meetings of your association, and I am sure that after you have threshed the whole subject out you will be astonished to find how much can be said for as well as against it. This, however, I may say, that while the "old Adam" rises up very much against the "Thou shalt" and the "Thou shalt not" of a curriculum scheme, as it indeed does against every command, there is more in the words "Thou shalt" than in any other new feature which the proposed curriculum imposes.

After examining a young man I often ask him, "Have you attended any classes?" You will quite understand that I am careful never to put such a question, or, indeed, any question, to him previous to examination, so as to avoid the slightest appearance of being influenced by any external consideration. In nine cases out of ten the reply is, "Yes; I have attended So-and-so's classes."

With this experience, the conviction is forced upon me that every one of these young men would have been better trained, and probably also more cheaply trained, had he attended a well-defined and recognised course of pharmaceutical education. At present pharmaceutical education, strictly speaking, is to a great extent in chaos. There is no defined course of study, no special classes, if we except some of the larger centres, where in the majority of cases the teaching follows the line of examination, instead of the reverse. A curriculum would define the course and limits of your studies, and thus concentrate your energies and your means likewise. Education under any circumstances is good, but well-directed and systematic education is much better. One word here to masters. Encourage your young men, and give them every opportunity for study. I know from personal experience that it is next to impossible to personally supervise these studies, and yet much can be done in the way of directing and guiding them. By doing this, rest assured we get better, more intelligent, and heartier service, while at the same time we are advancing the true cause of pharmacy. I always feel proud of my calling, and with

years this feeling only increases. I would like to infuse some of this enthusiasm into you young men. I believe that, next to the clinical and medical, pharmacy takes the place in representing and carrying out the purposes designed for the good of our fellow-men, and if this idea of its high vocation once permeates our whole being, depend upon it the feeling will ooze out at our very finger points. When I think of all this I look upon stores and cutting shops with comparative indifference—mere incidents in the history of pharmacy, accentuating only its progress, and probably also helping it to rise to something higher.

"IN CONCLUSION."

Pounds, shillings, and pence tend no more to constitute the true existence of pharmacy than does the abundance of what we shall eat and what we shall drink constitute the true existence of man. No, there is something higher and nobler than this in pharmacy, and we never need feel failure so long as we continue in the future, as in the past, to infuse our whole life's power and influence and intelligence into our work, ever keeping in mind that

Whether doing, suffering, or forbearing,
We can do much by persevering.

The address was frequently cheered, and at its conclusion a hearty round of applause was given to the speaker. After a short speech from Mr. J. Rutherford Hill, who was called upon by the chairman, a vote of thanks to Mr. Gilmour was passed on the motion of Mr. D. McD. Skinner (vice-president). At the request of Mr. T. C. Henderson (honorary secretary), a similar vote was accorded to all who had given the association financial aid. Mr. Charles Kerr, Mr. Frank W. Young, Mr. John W. Russell, and Mr. Robert Lindsay also spoke.

MIDLAND COUNTIES' CHEMISTS' ASSOCIATION.

THE session 1889-90 was opened on Tuesday evening at the Midland Hotel, Birmingham, by a conversazione, at which the President (Mr. W. F. Wyley) delivered his inaugural address. There was a large attendance, including a considerable number of ladies. There were present, in addition to the President, Professor Tilden, Professor Eliot, Alderman Bird (Coventry), Messrs. C. J. Arblaster, A. Southall, J. Austin, G. E. Perry, S. Grice, E. Meggeson, J. O. Morris, J. Hayes, W. Watkins, A. Perks, T. G. Reeves, H. Campbell, R. Campion, R. D. Gibbs, C. F. Evans, J. Hines, W. H. Pullen, W. Jones, W. H. Jones (Coventry), A. Trow, C. S. Ellis, T. Reeves, J. Blackwell, W. Southall, F. H. Alcock (secretary), W. R. Hedges, jun., E. J. P. Ferriday, C. J. Crooke, F. Barlow, and J. Spencer.

The Secretary (Mr. Alcock) read letters of apology for non-attendance from Professor Hillhouse, Mr. Charles Thompson (joint hon. secretary), Councillor Barclay, Mr. Sellars (Coventry), Mr. J. T. Barratt (Leamington), Mr. B. Davies, Mr. R. Bremridge, and Mr. S. Taylor.

The PRESIDENT then delivered the following

INAUGURAL ADDRESS.

By W. F. WYLEY, J.P., F.C.S.

My first duty is a pleasant one—it is to thank you sincerely for the honour you have done me in electing me president of your association. So far, and as vice-president, I have had few cares, and, if I except the idea of having to deliver an address before you, no troubles. Custom demands a speech on an occasion of this kind, and to worthily occupy your attention for even a short time appeared to me a somewhat serious task.

In his valedictory address Mr. Perry exhausted the topic of education, and though there are still many serious problems to which I could allude, I am unable, I fear, to offer a satisfactory solution of the difficulties. Such difficulties will be surmounted, no doubt, in time, and the greater the union between chemists themselves, the sooner the end aimed at will be secured. As an association, I think we may congratulate ourselves that we have secured a home at so admirable a place as the Mason College. The college authorities are not ashamed of us, and we, in our turn, are proud

of being recognised as a body of some importance. On this point, however, it may be remarked that we should do well to try and improve the occasion by securing a special room for our exclusive use, a room in which we could store any acquired property in the shape of books and specimens. We may not be able to get this at once, as I believe the college authorities are at the present time somewhat pressed for want of space, but by expressing our desires in the proper quarter we may receive attention in case any extensions of the buildings are made. But I feel sure the future of the association is secure, and, with little effort, much could be obtained of a permanent character, suitable for a fixed home, and useful alike to the student and the pharmacist. Year by year the association has manifested itself by the production of useful papers, or by the discussion of trade questions, and the name of the Midland Counties' Chemists' Association is as well known as that of any of the provincial associations of the country.

Our membership is not confined to Birmingham alone, our council has representatives from Leamington, Dudley, Stourbridge, Walsall, Wednesbury, Wolverhampton, and Coventry, and having such an excellent centre for operations as the city of Birmingham, it is to be regretted that other towns do not send a larger contingent, and thus make it a truly representative Midland Counties' Society. The existence of such an association as ours is a necessity, since in every large town or centre there should be some sort of guild to which chemists should look as a means of providing union amongst themselves. An association such as this could do much to bring any matter requiring attention before local members of Parliament, both by direct communication with the representatives themselves, and also by directing chemists of neighbouring towns how they should act. In this way every M.P. through the country could be reached (and it is possible might be in some measure influenced) by his own constituents.

EDUCATION PAST AND PRESENT.

A special object of this association has been the education of apprentices and assistants, but in this capacity the association has not met with the encouragement it deserves, not from faults of its own, but from a lack of pupils ready and desirous of being taught. The association is still prepared to carry on classes, and either of our valued honorary secretaries will be pleased to furnish full particulars; and it is quite unnecessary for me to say anything about the merits of the gentlemen who have kindly undertaken the work of teaching, as they are well known to all. Mr. Stokes Dewson will take English, Latin, and arithmetic for the Preliminary, and also chemistry and chemical physics. *Materia medica* will be taught by Mr. F. H. Alcock, and pharmacy by Mr. G. E. Perry.

Without in any way attempting to find fault with the average apprentice, it is patent to all that a considerable number of young men put off all study until apprenticeship is over, and then attempt to acquire in a few weeks what ought certainly to have occupied a much longer period, and been more thoroughly mastered—that is, granting that a thing learned should be thoroughly assimilated and fixed in the memory by constant practice and repetition rather than merely held as a fleeting impression.

In the good old days when the world was supposed to go very well, easy-going manners were part of the age, and so far as the old world apprentice was concerned, if he pounded well, and could read the Latin directions of a prescription, knew what aloes and rhubarb were like, and could distinguish oxalic acid from Epsom salts, had the knack of spreading a plaster, and doing various things of a like nature, all of which could be acquired in a mechanical kind of way, he knew his business. No examination stared him in the face, or awoke him trembling from his dreams, and few hardly realise how great a change has taken place during the past thirty years. It is not now enough for a man to possess mere mechanical skill, though this is the first essential requisite. He must have a mind trained to the point of being able to take up any new departure that may arise, and grasp any advance that is sure to take place in scientific medicine, so far as it applies to his calling. It behoves, therefore, every thinking young man to take in the spirit of the times and act accordingly. Why leave all to some future date? Surely the daily handling of drugs need not be mere

drudgery. Not even going beyond the B.P., an amount of information could be gained day by day in odd moments, which would be of infinite service, save an endless amount of "cram," and stand in good stead when the ordeal of examinations had to be faced. Systematic study during apprenticeship is an absolute necessity, and much valuable help could be obtained by making use of this and kindred associations. On all hands it is admitted that increased education is a necessity of the times, and this principle has been recognised by the Government in their legislation during the past session; but it is to be hoped those who have the control of the education of the future pharmacists in their hands will also remember that, as a trade, trade interests must be considered. Let the future pharmacist be the accomplished man he ought to be, but let his interests be protected in proportion. If legally it is demanded that for the public good the retailer and dispenser of medicines should be a highly-educated man, then let the law clearly restrict the sale of all drugs to those from whom special requirements are demanded.

RESTRICTION IN PHARMACY.

On the Continent, as we all know, a greater demand is made on the individual before he becomes a pharmacist, but the State takes more care of him afterwards. The number of pharmacies is limited, and young men, before attempting to crowd into the business, probably consider carefully their future. Foreign Governments, in most cases, kindly protect the dispenser of drugs, and seek to circumvent the law of nature and of trade alike, known as the "survival of the fittest." Whatever educational height we may reach, and whatever protection may be secured, we can hardly imagine our free-trade notions will allow the limitation of pharmacies. The idea of limiting the sale of drugs to registered chemists only would, no doubt, meet with violent opposition, but in the fact of the whole drug trade being unrestricted as to the number of shops lies the possibility of such an object being attained. For it might be argued that so long as it is an open trade, so far as numbers are concerned, that so long would business enterprise regulate prices, and secure to the public the results of competition.

Local associations of this kind could do much to regulate this competition and confine it within reasonable bounds, and such associations will, I feel sure, achieve much in this direction in the future. Improved education must inspire a greater personal dignity, and with this must come also the desire to act in accordance with the general spirit of the craft, and the future typical pharmacist would not only consider himself a business man, but also a member of an honourable profession, the general welfare of which he would consider with his own advancement. I for one, however, do not consider the old order of things with regard to prices can ever be restored, and those in the trade, as well as those just entering, must face the difficulty.

THE EFFECT OF STORE PRICES.

This brings me to speak of "stores"—a question of extreme difficulty to deal with. A corporation of capitalists, not registered chemists, employ a qualified man to do business for them. This man's name and qualifications appear on the various labels of the establishment, and the public are satisfied. The store undersells the ordinary chemist, and obliges him to come down in his prices or lose his customers, and, even should he cut, he has in such an establishment a formidable rival. To meet the difficulty many chemists have adopted similar tactics, and the notice, "Goods supplied at store prices," may be seen as an adopted business motto all over the country, so that it is not merely a question now of stores, but also of a divided drug trade. In this way the retail trade is being decimated, and without Government interference the age of the limitation of pharmacies may be said to have been inaugurated. The supply of physic must remain a limited and almost fixed quantity in relation to population, and the problem is how to supply the comparatively limited demand at such prices as shall be remunerative to all concerned.

A decrease in price ought to mean an increase in business, but this cannot be secured to all. The tendency of the age must, therefore, be to lessen the number of pharmacies, unless the majority of chemists tack on other business, and

become very general dealers. The undesirableness of this is obvious.

Raising the educational standard is one means of controlling the number who enter the trade, and so confining the business to a "limited few." We have heard much of chemists qualifying themselves to do special scientific work, to act as public analysts, electricians, &c.; but that chemists will ever do this to any great extent is extremely problematical. In each department of science specialists have arisen, and even the best educated pharmacist would find it difficult during the intervals of business to compete with such. To divide the medical profession into two branches—embracing, on the one hand, the physician, who would only write prescriptions, and, on the other, the educated dispensing pharmacist—would seem a most desirable state of things, but at present, alas! such a plan is very much *in nubibus*. The present time is, undoubtedly, a transition period, marking a new order of things, and such times are always hard to pass through. Not only is the trade affected by the new method of doing business, which the stores and the cutter have originated, but a change is also rapidly coming over the nature of the very business itself.

DISPENSING AS IT WAS, IS, AND IS TO BE.

In days gone by potions, plasters, juleps, and other concoctions which the privileged apothecary supplied to the order of the physician gave way to what we now regard as a more rational system, and complex concoctions and mixtures became the simpler preparations. At present we see an even greater change taking place. The natural products of the vegetable kingdom are being replaced by artificial chemical products. It has long been the hope of science to produce in the laboratory the active principles found in plants, and which modern methods of working have isolated and placed at the service of prescribers; and this hope—not yet realised, or at least only to a small degree—has led up to other chemical issues of great importance in the synthesis of bodies exerting a powerful action on the human organism and capable of employment in medicine. To draw a fancy picture, with a possibility of more than fancy in it, we may find that the Pharmacopoeia of the future will be devoted entirely to alkaloids, organic bodies, and the salts of a few metals. The galenicals of our present time will have entirely disappeared, and even the so-called elegant preparations of certain houses will have passed into oblivion along with the historic houses which produced them. The pharmacist pure and simple will be the sole surviving member of the drug trade, and there will be no one between him and the great firms devoted to the manufacture of the purely chemical substances, save the general merchants who will supply in smaller put-up packages what he can only purchase in large original cases. Even among the great firms or corporations competition will have specialised manufacture and monopolies will be created. The wholesale druggist of to-day who conducts a somewhat complex business, who manufactures galenicals and chemicals, and buys on the various markets, and distributes his heterogeneous stock among a thousand or more customers will have disappeared along with opium, cinchona, and other crude natural products. The latter will be remembered only as valuable commodities which once supplied the race with well-known articles, such as morphia, quinine, &c. Dispensing will consist principally in rearranging compressed pellets, gelatine discs, capsules, granules, &c., in smaller packages, and labelling with directions for use by the patient. The pharmacist at such period will not, however, be considered a mere distributor (a sort of improved automatic machine from which a coin of small value will produce almost any article required), but will be regarded by the law and the public as an educated man capable of deciding at a glance which one of some thousand combinations of some particular group is intended.

PROGRESS OF SCIENTIFIC MEDICINE.

However imaginative and purely fanciful the foregoing sketch may appear to many, the fact remains that month by month, almost day by day, we see some new compound added to the list. This general advance in scientific medicine is to my mind the greatest argument in favour of the "education craze," as some term it, in relation to pharmacy, and it does not appear to me possible for any body of men to advance

with the times without reaping reward in some form or other; in plain English, without getting proper remuneration for their labour.

As an example of how rapidly the medical profession is advancing, I may refer to the recent Croonian Lectures, delivered before the Royal College of Physicians, by Dr. Lauder Brunton. These lectures have entered fully into the relation between chemical structure and physiological action, and many present will no doubt have noticed the number of chemical bodies alluded to which have not as yet passed beyond the trial stage, or even been tried at all, except by a few original investigators. We have, however, a practical acquaintance with some which have established themselves in the favour of prescribers—chloral hydrate, butyl chloral hydrate, and artificial salicylic acid are too old to be alluded to, but they are good examples of the extent to which such products of the manufacturing laboratory may be utilised. Saccharin is a much later addition, but the extended use of this substance, too, has robbed it of any special attraction. As we have seen one new remedy supplanting another with regard to vegetable drugs, so we may expect the same with regard to laboratory products, and many out of the large number will probably fall into disuse. When kairine was first introduced as an antipyretic it received considerable attention, but it has now almost disappeared from medicine; its persistent bitter taste was such that Martindale tells us that in the London Fever Hospital no patient could be induced to take a second dose in solution. After brief allusions to the characters of many of the chemical remedies introduced within recent years, the President continued:—

I remember that a year or two ago a prominent representative of German pharmacy, resident in England, stated that Englishmen were somewhat slow in adopting new organic chemical remedies. That statement did not pass unchallenged at the time; and in relation to this point I might, I think, refer to the fact that as a nation we are legally constituted to receive with open arms anything that our enterprising neighbours may send us. Every tin of antipyrin we handle distinctly states that "it is not for sale in the United States of America," and declares, also, "Importation into France is prohibited on account of the French patent laws." In France, however, the same substance, manufactured by French chemists, is sold under the name of "analgésine." The real value of antipyrin is, however, established, and also of many other chemical remedies now in use; and this appears to me the most wonderful example of the application of chemical research to medicine, and as leading the way to other compounds which can be used for the relief of pain.

A PROPOSED CHAIR OF PHARMACY.

One object of the association, as yet not alluded to, has received considerable thought, and, it is hoped, will be realised in the near future. It is the founding of a professorship of pharmacy at the Mason College. The project has so far advanced that either of the hon. secs. will be able to name the sum necessary for endowing such a chair. Future educational work will require local centres to provide the proper means of instruction, and it is one of the duties of this association to move with the times. So far our association, in common with other similar provincial societies, has received very little help or recognition from Bloomsbury Square. It is true that small sums have been granted, but what appears to be required is something more than this; and direct communication between associations such as ours and the General Council would be most desirable.

All over the country remarks may be heard that the Pharmaceutical Society is not doing enough for country members, and if all provincial associations were affiliated with the Society in London, the first step towards getting the trade generally in touch with the Society would have been made. That country associations have established themselves firmly and become important factors of pharmaceutical life will I think, not be denied, and their recognition by the parent Society, as local branches or otherwise, should not, I think, be much longer delayed. *En passant*, would not a trade conference held once a year, and with papers devoted to trade subjects only, and held at the same time and in conjunction with the Pharmaceutical Conference, be of service?

The President concluded his address by thanking those

present for their patient attention—the ladies especially, who, not being pharmacists, must have come out of pure kindness. His remarks, he was aware, had been of a somewhat rambling nature, and he felt that he had not been able to offer any panacea for existing trade ills. The knowledge of these, however, would serve to bind them closer together as an association, and union among themselves would certainly offer the best available means of solving the intricate business problems of the day.

Professor TILDEN proposed a vote of thanks to the President for his address. He said Mr. Wyley had referred to the connection of the association with Mason College, and he (Professor Tilden), though not authorised to speak on behalf of the council of the college, desired to say that so far as the comfort of the association was concerned he should not be wanting in making that connection useful and valuable to both sides. (Hear, hear.) It had been a source of regret that he had not been able to keep up his connection with pharmacy, nevertheless it always afforded him great pleasure to have an opportunity of attending a gathering of pharmacists and hearing how pharmacy was progressing. Mr. Wyley began by speaking of the position and qualifications of young men who were now in the trade. Their position was like that of the young man who entered the medical profession. Difficulties of the same character, although in reference to different subjects, beset them on their entrance into the business, but he felt that part of the difficulties the President had alluded to would be got rid of, and very great advantages accrue to those who adopted pharmacy as a profession if some greater rate of progress could be adopted in regard to the position of scientific studies in the schools. It seemed to him, and he had previously expressed the same view, with regard to young men who were about to enter the medical profession, that very many of their difficulties about dealing with scientific matters could be got over if the head masters of schools more fully realised their responsibilities. (Hear, hear.) As a matter of fact there were very few schools, even those of the greatest pretensions, that offered anything like satisfactory instruction in such subjects as physics, chemistry, and natural history. It appeared to him that a boy leaving school at, say, 17 years of age, ought to have learnt by that time almost as much pure physics, chemistry, and botany as ought to be required for the purposes of his technical studies. If that were so, a young man entering a business with the view to becoming a pharmacist would not find it necessary to devote the small leisure which fell to his lot after a long day's work to subjects of that kind. He would have a proper foundation of general principles, and find very little difficulty in qualifying himself in the more professional parts of his business, such as chemistry applied to pharmacy, and in all those subjects that Mr. Wyley had referred to. Even in such cases as that—supposing those reforms were effected—he still ventured to suggest that when a pharmacist took an apprentice, he really ought to regard him as a pupil quite as much as an assistant, and when indentures were signed he thought it was only fair that a due proportion of time should be set apart for study. It was unreasonable to keep a young man at work all day long, and then expect him to study that exceedingly interesting volume the Pharmacopœia. (Laughter.) In reference to the question of prices, he would speak as one of the outside public. He thought in regard to this difficulty that the only satisfactory solution of it would be for the pharmacist to charge, not for the material, but a definite fee for his professional services. The public would very soon be educated to understand that matter. When they went to a doctor they paid him his fee, and when they went to a skilled pharmacist they would pay for his skill. If that practice was adopted by a few leading firms for a few months, he believed the public would ratify it, and there would be none of those disagreeable *contretemps* which were found when customers went to different establishments and found different prices charged. (Hear, hear.) If a definite charge were made for professional services, and the cost of materials added, the public would understand that, and be educated into adopting the system. (Applause.)

Mr. A. SOUTHAL seconded the motion. He urged the necessity of chemists becoming more united, and said that, knowing something of the Pharmaceutical Society, he felt that that was the Society they, as chemists, ought to support. He was told that the Society did not do so much in regard to

trade matters as it ought to do. Well, they had a trade society, but he supposed that was too much trade. It was not supported by the chemists and druggists of the country, and it died a natural death. What was the Pharmaceutical Society to do? It was gradually dwindling down, because it was not properly supported. But he believed if all pharmacists would be in earnest, and would support the Society, it would very soon be found that it was a power, and that the work would be done that the country wished should be done. They could make the Pharmaceutical Society what they pleased. In conclusion, he spoke of the large number of ladies who were joining the ranks of pharmacy. The resolution was then put and carried, and the President briefly replied.

A musical entertainment followed, and Mr. Sidney Pridmore gave a number of his well-known legerdemain performances.

AN ADDRESS TO THE STUDENTS OF THE SHEFFIELD SCHOOL OF PHARMACY.

By Mr. S. R. ATKINS, Salisbury, J.P.,

Delivered at the Opening Meeting of the present session, held in the rooms of the Sheffield Pharmaceutical and Chemical Society, on Thursday.

GENTLEMEN,—In addressing you this evening I am fully conscious of the disadvantage under which I labour in following a succession of distinguished pharmacists who have so exhaustively reaped the field of educational and technical inquiry as to leave but the gleanings for myself. On the other hand, I am not unmindful of the fact that I speak, to a large extent, to a new set of men, and that it sometimes happens that old truths receive a new setting from a fresh speaker.

Let me at once say how thoroughly I appreciate the honour of being thus invited to speak to you, gentlemen, students of the Sheffield School of Pharmacy, and how solicitous I am that something uttered to-night may prove an incentive to vigorous sustained study, and assist towards the formation of a decision on the part of some hesitating youth, not merely to devote a life to pharmaceutical labour, but also to resolve that success shall be deserved, and, if practicable, achieved.

Believe me when I say it, that I have an intense sympathy with you; I cannot but regard you, with your buoyant hopeful temperaments, with all the capabilities and possibilities of your future, with a strong desire that your career may be alike honourable and useful.

Oh life! how pleasant is thy morning,
Young fancy's rays the hills adorning.

Looking at the position you occupy in this year 1889, the vantage-ground held by you as students in this school, I cannot but congratulate you most heartily as I contrast it with the corresponding period of my own life. At that time there was no pharmaceutical literature worthy the name; the standard works in chemistry were fast becoming antiquated, in face of new discoveries and new modes of teaching. The school at Bloomsbury Square, recently established, was slowly fighting its way to recognition, despite the active antagonism of some and the supineness of the many, but its influence on technical education in the country was practically *nil*. The chemist of that day failed, except in rare and highly honourable instances, to realise his responsibility to his apprentices; few books, little apparatus, and that of an antediluvian type, small encouragement to study, less guidance, and no definite or adequate time allowed for it; such were the average environments of the average druggist of the period referred to.

Do not, however, let me be unjust. I am not wholly complaining of these days; in the process of necessary evolution they answered their purpose, and have given place to others, in some, but not all, respects better. We were happy enough in our blissful ignorance; we worked, I think, harder—longer I am quite sure—than the young men of to-day, but it was mainly manual, not mental labour. Our incapacity to pass an examination was not revealed, for the needful but painful test had not yet been invented, certainly had not been applied.

That the voluntary system of education and examination was not wholly inoperative for good is proved by the number of competent—and, let me gladly add—distinguished pharmacists traceable to the particular epoch indicated, which I venture to describe as the very “Renaissance of Pharmacy,” many of whom survive to this present day, and to whom we confidently look as the vanguard of progress. Some of them were recently with us at Newcastle, others would have been gladly welcomed there: mentioning names were alike invidious and superfluous.

But in addition to these men, whose names are not likely to perish, enshrined as they are in our archives, there are many others who have passed away and left no widely-known record of their life; but I assure you it is worth searching after and finding. In every part of the country have been and still are men of rich culture, wide and varied reading, highest probity, possessing the confidence and esteem of the society in which they mingle. I often recall the memories of pleasant surprises in my ramblings of past years here and there, as I have come across such choice spirits, and wished I could introduce them to the wider fraternity of pharmacists. It is only half the truth, and that the lesser half, to say with Gray—

Full many a flower, &c.

The whole rounded truth lies in a true life wherever lived.

Compared, however, with the men to whom I have thus briefly referred, your position as students in Sheffield is one of distinguished privilege. Let us for a moment consider it.

That there are special and peculiar difficulties in your path a prior generation was unacquainted with I readily admit, but coming, as they will, after your direct student life is over, I need not dwell on them at length.

You will be called to encounter a competition, not merely of labour and capital, but of brains, that will probably intensify as population becomes denser. For that competition in the race you are now training, and what I wish specially to emphasise is the fact that in the facilities for efficient and adequate training now within your reach energetically seized, lies, other things being equal, the result—success.

I assume that you have commenced with the priceless boon of a sound liberal education at school, which you have wisely availed; that you have already passed the Preliminary examination of the Pharmaceutical Society of Great Britain or its equivalent; that you have now deliberately chosen the trade of a pharmacist, or the profession of pharmacy, call it which you like; that in the various establishments of this great manufacturing town you are acquiring a practical knowledge of the details of your business behind the counter and in the laboratory, and that you have entered this school to acquire a knowledge of those varied subjects on which the science of your craft is built, and the quality and quantity of which knowledge will by-and-by be tested in the examination-room.

I congratulate the successful students on the good use they have made of these advantages. I congratulate every man who has honestly worked here, whether a prize winner or not. The syllabus of study is an admirable one; its measured proportion of theoretical and practical instruction is most judicious; the inadequately-remunerated, self-sacrificing services of the teaching staff are beyond all praise.

If I were to indulge any apprehension for the future of this school it would be that you cannot expect a perennial supply of such instruction on such terms.

Another fact in your history as a school is its rapid growth, the surprising increase in the number of students, the high percentage of attendance, and, as a result, the substantial character of the work that has been done.

I speak under correction, but I believe I am correct in saying that your school is independent of the famous institution of Sheffield, the Firth College. Unconsciously I may be treading on delicate ground, but I venture to utter the conviction that it would be a good thing for this school to be in affiliated relations with the Firth College. I watch with deepest interest the marvellous growth of the great Universities and Colleges in various parts of the kingdom—Newcastle, Nottingham, Liverpool, Leeds, Manchester, Hull, Sheffield, Bristol, and other important towns are the first-fruits of a harvest destined to scatter blessed educational influences over the country.

If at present you are not indebted to your distinguished

benefactor, Mr. Firth, for any portion of your technical instruction, you have the excellent college in Sheffield, with its broad basis of higher instruction in the wide area of *belles lettres*, available by you, according to your varied taste and opportunity.

Provincial education, or, more correctly speaking, pharmaceutical education in the provinces, is a theme on which much has been written and said, and on which a great deal more remains to be uttered. For the most part the experiments have been lamentable failures; schools have been started, libraries and museums formed, lecturers and teachers engaged, local subscriptions collected, the whole subsidised by grants from headquarters, with results I forbear to describe in detail. The evident reason for such disappointing failures being the inversion of the proper order of precedence—furnishing the supply before the demand existed, indeed the possibility of its existence, save in rare personal instances. The endeavour to meet the needs of these rare instances of innate love of knowledge is a commercial failure, and to a certain degree may be deemed superfluous. Such men would triumph over any difficulty—indeed, make the very difficulty a stepping-stone to success; such men do voluntarily what most attempt only under pressure; hence my strong conviction that a prolonged curriculum enforced is indispensable for our young men.

I have at considerable length elsewhere argued out this matter. I may, in a sentence, now say that a careful and sustained consideration of the results of the examinations at Bloomsbury Square has convinced my judgment.

I am quite aware that I am open to the reply that the description I have given of the former condition of pharmacy in Great Britain goes to show that the voluntary system of education was not a failure. To that argument I venture the rejoinder that the voluntary system of education harmonised with the voluntary system of examination. But all that is changed.

Let us, however, suppose that the crusade recently commenced against examinations was successful, I would still urge the importance of compulsory training for its own sake under the changed conditions of commercial and professional life. The brain fight of the age is not slackening, and will not. The standard of intellectual attainment is being raised all round; pre-eminently true of the learned professions, it is also relatively true of a craft like our own, standing in close proximity to one of those professions.

The future of pharmacy is a matter of anxiety to many persons, and of speculation to others. I do not share the fears of the fearful, if only we are found true to ourselves; but I repeat and emphasise the conviction I have in another place expressed that our members will suffer diminution—a process of natural selection will prevail, chemists and druggists will dissolve partnership, the former to practise pharmacy with a higher recognised status than he now enjoys, the latter (the druggist) with a lower qualification, and, it may be, a limited licence, supplying more as a drysalter the varied requirements of the community.

Such a division of labour, differentiation of ability, does not necessarily need legislation to effect the severance, it is rapidly progressing to-day, a revolution none the less pregnant with consequences because so silent.

To-night we are concerned only with the first of these two classes, and, as students, I regard you as its representatives. If in the period of your school-life you have had the advantage of receiving at the same time some amount of scientific and technical instruction, so much the better; just to that extent has time been saved, and the foundation laid for the specific work you are now doing.

I have long thought that the elementary education of this country should be partly book and partly industrial or manual. Just so should the education of the middle class be jointly literary and technical.

I would ask you still to preserve this combination, though it may be necessary for a time to invert the proportions of these two sides of your educational career, and there can be no serious difficulty in the way with the facilities afforded alike by this school and by the Firth College.

This leads me in passing to offer a remark on the process of decentralisation now going on. I have referred to it in connection with the development of provincial universities and their affiliated colleges. I think, as time goes on, it will become true of provincial schools of pharmacy, such schools

furnishing the full course of instruction requisite for both our examinations, constituting recognised centres where the examinations should be conducted by a peripatetic examining board, and possibly—but on this point I have no definite opinion—a provincial mint, with power to impress the hall-mark of efficiency when acquired.

London has grown, and is growing, to dimensions utterly baffling all earlier forecasts as to population and area. What may be the future growth of our mighty capital it would be idle to speculate upon.

The very greatness of our empire, and the corresponding magnitude of its chief city, are strengthening the demand for decentralisation, a principle which, applied to the matter now under our consideration, gives a dignity and importance to such schools as the one I am now addressing.

In order that you may be able to utilise to their full extent the courses of instruction now within your reach, permit me to offer you one or two suggestions.

In the first place, I would express the hope that you have a definite aim in life, and that to be an educated, and, in its best sense, a successful pharmacist. Pray do not misunderstand me. I do not say, on the one hand, that this should be your sole or highest aim; it is not for me this evening to invade the domain of our higher life—my own convictions in this matter are deep and strong. Nor do I affirm that even this constitutes the entirety of human life; be grave and gay as occasion demands, laugh as heartily as you like when at the right time and the thing worth laughing at. Body and soul have each their claims, which must not be neglected; but I have not come to Sheffield specially to remind you of these, but the rather to press you to win your way into the foremost rank of pharmacy, for it is no contradiction to assert that in the front rank you will find more breathing-space—the greatest crush will always be with the rank and file. I press this sense of ambition on you, not simply for your own sakes—the substantial rewards, reputation, and money—but for its relative value to others. We are members of a guild or craft called on to contribute something to the general good, and, if possible, contribute the lustre of an honourable career in the world of pharmacy.

The ideas of individualism and confederate action, although seemingly divorced, are not really so: the best work in the world is accomplished by the former; the association and combination of individual workers is essential for large results on society. It was a profound saying of an Eastern philosopher, "Progress is attained by the perfection of the individual." "Prospiciens et respiciens" is a motto covering the entire field of human energy. Yours is the former attitude. An aimless life is a useless one. It is said of Lancaster, the celebrated educational reformer, that he not merely gave prizes to successful scholars, but that he had them constantly suspended before their eyes as incentives.

Napoleon at St. Helena was an exile in whom the fire of ambition had burnt down to a few bitter ashes of disappointed hopes, and he said, "I can now live only in the past." Macaulay tells us in graphic language how young Warren Hastings resolved to buy back the estate of his ancestors, and how he kept his word; and you recollect that Charles Dickens, struggling with limited means, fixed his heart on one day settling in the mansion at Gadshill—and did it.

Concentration of effort on the thing in hand is another suggestion I venture to offer; this is not easy, but most essential; strenuously let me insist upon it. I know from personal experience how difficult it is to train the mind to this fixed concentration, but nothing really becomes your own until this is achieved. The powers of acquisition and assimilation work then at their full bent, and can be turned off and on to other fields of inquiry with delightful ease, just as in certain kinds of athletic exercises different sets of muscles are brought into play. You acquire definiteness and depth of mental impression just in the measure of fixity of thought.

You will readily remember from your readings in English literature the names of celebrated men noted for this faculty. My valued friend the late Henry Fawcett told me that to this habit of mental concentration he owed the facility with which he could seize and retain mental impressions. You know how he could fix the attention of the House of Commons, while at extraordinary length he could

marshall figures he only heard of but never saw, and elaborate his views on Indian politics and finance.

The great Napoleon had this quality of attention in perfection, without allowing it to run into ridiculous abstraction. "My mind," he said, "is like a chest of drawers. When I have done with one subject I shut it up; then I have no confusion of ideas." George Stephenson and Hugh Miller as working-men are noted examples of the same faculty.

Another remark I may offer is one affecting the practical side of your student life, and it is this: cultivate the habit of *observation and independent reflection*. Behind the dispensing counter and in the laboratory you will be constantly observing phenomena of the greatest interest and importance; let not one of these pass unchallenged as to its meaning. Some will be familiar, and so will be the explanation; others give rise to thought as to the why and wherefore. Necessarily you will not always be able to inquire or reflect at the moment: carry your note-book in your pocket, and make a note of it; in other words, chew the cud at your leisure. The text-books will come to your aid for the most part, for the path you tread has been well worn by previous travellers; none the less do not accept the explanation without independent proof. I do not agree with Carlyle's cynical estimate of the intelligence of the population of the British Isles, but I do believe that the habit of real independent thought is a rare one.

How enriched your life will be with a mind replete with facts, and accustomed to reflect upon them! How full of significance the world around you, ever suggesting, ever stimulating inquiry; how dignified your work, though done in a humble sphere; and to a large extent how superior it will ultimately place you to the chafing influence of little cares! Pray do not imagine that I am in the realm of metaphysics or poetry in thus talking to you. I am speaking as a man of the world, who in early life had not your scientific advantages, who knew in the first years of his business career what working and waiting for results means, but who found in the intellectual pursuits to which I have referred a charm—a fascination I fain would have you conscious of.

I have pressed on your consideration as students the habits of definiteness of purpose, concentration of thought, associated in the practical arena of your daily life with observation and reflection.

By-and-by, and all too soon, the training will have ended, and the real earnest work of life will begin.

There is a Providence that shapes our ends
Rough-hew them how we may.

In various parts of this, or it may be of other lands, you will become, I trust, the men of light and leading; and whilst authorities in your special pursuits, you will need other and more varied furnishing to make you the all-round men with whom we like to mingle. The vast, practically limitless worlds of mind and matter lie before you; try to cultivate an acquaintance with some portion of these. You have, I trust, a love of books; foster this love assiduously. Sir John Herschell says "that if he were to crave a taste which should stand by him under every variety of circumstances, and be a source of cheerfulness to him at all times, that taste should be reading."

But for relaxation you will need your "hobby." I shall not attempt to choose for you—the field of choice is ample and varied—but simply ask you to excel in the recreation as well as in the work of your life.

You are, I hope, as apprentice or student already connected with the Pharmaceutical Society of Great Britain; may that connection continue, and your attachment to that important institution grow!

I do not ask for gratitude for what it has already done for your school, and, I believe, is prepared yet to do for it. In passing, I can assure you that the Council of our Society watches with keen interest the experiment of provincial education being worked out in this town, and I know is prepared to back its sympathy with further pecuniary assistance when it sees, as I do this evening, a large and continuous supply of students, and the liberal support of the school by local pharmacists.

But I base my appeal for your sympathy and support of the Pharmaceutical Society in the after years of your life because I think it deserves it, and I regretfully add, needs it. It is an institution much misunderstood, and even more abused.

I hold no brief from headquarters. I am prepared to admit that we make mistakes, and will accept my individual share of the responsibility for them; at the same time I declare my strong conviction that the Society deserves the confidence of the trade, and that nothing can be more suicidal than for chemists to stand outside it, or, being inside, hinder its usefulness by traducing it.

The confidence of the public, of the medical profession, of the Government departments of the State, and absolutely and completely of Foreign countries, are alike the results of a higher education and a keener sense of our responsibility to the State. That we may have been somewhat tardy and conservative in the exercise of existing powers, or the acquisition of fresh ones, I will not deny; but a long and close official connection with the Council at 17 Bloomsbury Square warrants me saying that the charge of indifference to trade interests is not true.

How then can we explain the palpable fact of widespread unpopularity? The answer, I think, is twofold. In the first place we are an examining body, and with the disastrously large percentage of failures in the examination-rooms, we incur the dislike of the unsuccessful. The enforcement of the penal clauses of our Acts of Parliament alienates many others. But by far the most potent source of estrangement lies in the fierce competition which chemists have to encounter, most unfairly, I admit, but which for the most part cannot be touched by legislation.

It would not be difficult to write a prescription for many of the ills which afflict us, but I know not the pharmacy where I could get it dispensed. Certainly the House of Commons, with its tardy legislation, is not of much service. It is that the old days, the good old days, should revisit us, when we had plenty to do, and were well paid for doing it; when stores, bogus drug companies, cutting chemists, &c., were undreamt of.

"Could those days but come again" all would be well. But they cannot, and we must accommodate ourselves to the altered aspect of affairs.

As students you are doing so by better scientific training for life, and, I trust, an impartial recognition of the Pharmaceutical Society in your sympathy and support when you are in a position to render them. Let this thought be your inspiration for the future—

He most lives

Who thinks most, feels the noblest, acts the best.

At the meeting at which this address was delivered the President, Mr. A. Fox, occupied the chair, and letters of apology were read from Dr. Thomson, borough medical officer; Mr. Cross, Shrewsbury; Dr. Charles Symes, Liverpool; Mr. Richardson, Leicester; Mr. Martin, Newcastle; Mr. Woolley, Manchester, and others. There was a large attendance. After Mr. Atkins had delivered his address, which was received with evident signs of high appreciation,

Mr. LEAROYD, ex-President, moved a vote of thanks, and referring to the chemists of the past, said that Jacob Bell in 1843 said that the first thing to be done was to improve the education of chemists themselves. Mr. Learoyd also spoke of the personal gratification which the pursuit of scientific knowledge gave.

Mr. BRADWALL supported what had been said regarding the examinations of the Pharmaceutical Society, and said that Mr. Atkins had stimulated practising chemists as well as students.

Mr. WARD believed in having an enforced curriculum, and students going up to the London school for final training.

In reply to a vote of thanks, Mr. ATKINS expressed the wish that the Pharmaceutical Society could see its way to give books to prize-winners in the provinces, in addition to local prizes, as a recognition of affiliation to the Society and its work. He highly praised the new quarters of the Society.

In the course of the evening prizes were presented to the successful students of last session, and after the meeting those present supped together, when there was more speechifying.

Medical Gleanings.

ECZEMA.

THE following are some recent notes:—Dr. Unna strongly recommends in the treatment of seborrhoeal eczema the application of linen cloths soaked in solution of resorcin. (Resorcin and glycerine, of each, 10; alcohol, 180; 1 part of the mixture to be diluted with 4 parts of water.) A thin layer of cotton wadding, soaked in the solution, is applied, and covered with waterproof material. Dr. Mackintosh gives the following as an ointment which, in most cases, pretty nearly approaches the character of a specific:—

Bismuthi subnitrat	..	..	..	..	℥iv.
Zinci oxidi	..	..	..	..	℥j.
Acidi carbonici liquidi	..	..	..	..	℥ss.
Vaselini albi	..	..	..	..	℥ij.

Ft. ung.

Or,

Bismuthi subnitrat	..	..	..	..	℥ij.
Zinci oxidi	..	..	..	..	℥ss.
Glycerini (Price's)	..	..	..	..	℥ss.
Acidi carbonici liquidi	..	..	..	..	℥xxx.
Vaselini albi	..	..	..	..	℥vj.

Ft. ung.

The latter ointment mixes into a beautiful enamel-like cream, which is cooling, and acts as a balm to the irritable skin. When constant tingling and irritation disturb the patient's rest at night, the following lotion is said to be invaluable:—

Bismuthi subnitrat	..	..	..	..	℥i.
Glycerini (Price's)	..	..	..	..	℥iv.
Acidi carbonici liquidi	..	..	..	..	℥xxij.
Aque roseæ, ad	..	..	..	..	℥j.

Sig. Shake up, and apply with a camel's-hair pencil.

During the day, when business has to be attended to, and the ointment cannot be applied, a powder will be found useful:—

Cimolite	} Of each equal parts.
Bismuthi subnitrat	
Zinci oxidi	

Fiat pulvis.

POISONING WITH HENBANE.

MR. A. H. DODD, L.R.C.P., of West Brighton, publishes notes of a case of poisoning with 6 fluid drachms of tincture of henbane. The sufferer was a lady of 50, and the symptoms of poisoning were so acute that it was only with great care that a fatal result was averted. Five hours after taking the tincture the patient was quite delirious; later, owing to vomiting, she recovered somewhat, and was practically cured after a night's rest. It is a remarkable fact that a slight deafness with which she was troubled was much aggravated whilst under the influence of the drug.

SULPHONAL.

THIS hypnotic appears to be growing in favour with those who use it intelligently. Dr. Gilbert Richardson, of Putney, in giving particulars of a case in his practice—an intemperate lady suffering from insomnia—says that he has used sulphonal in a certain number of mental and allied conditions during the year, and has found it a much more useful remedy than any other recent introduction to our list of soporifics. There are no unpleasant after-consequences—almost inseparable from most of the better known narcotics; while, among the newer remedies, urethane is too mild to be of much service, paraldehyde is disagreeable, and hyoscine has the objection of having to be given subcutaneously. Compared with normal sleep, that induced by the action of sulphonal seems to be more placid; the pulse-action is reduced by about eight to ten beats in the minute; the respirations are less by about three. These observations were made with 15-grain doses; 30-grain doses did not produce much longer sleep, but were followed by drowsiness during the day. Dr. Richardson has found sulphonal useful in cases of migraine—more so, in some instances, as an immediate remedy than antipyrin or soda salicylate with citrate of caffeine.

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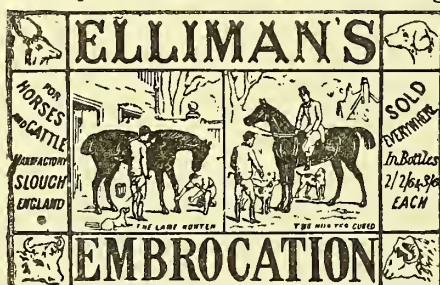
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See DIARY, 1889,
 Pages 17 and 18.

EDITORIAL NOTES.

**UNQUALIFIED ASSISTANTS AND THE
 SALE OF POISONS.**

WE are glad to learn that in regard to the sale of poisons
 by unqualified assistants the Pharmaceutical Council have
 resolved to adopt the policy advocated in this journal a fort-
 night since. It will be remembered that a servant-girl at
 Wandsworth bought at a local chemist's shop on a Sunday
 evening a packet of vermin-killer, with which she took away
 her life. It turned out that she was served with this poison
 by an unregistered assistant, and the coroner, Mr. Braxton
 Hicks, in whose court these circumstances were made public,

intimated his intention of directing the attention of the Pharmaceutical Council to the breach of the law, with a view to the prosecution of the assistant referred to. Mr. Hicks, it appears, did communicate with the Council, and his letter and the course to be followed were discussed in committee at the October meeting of that body. According to our information there was an energetic opposition to the proposed prosecution, and we understand that Messrs. Abraham, Evans, Leigh, Robbins, Schacht, Southall, and Watt spoke and voted against it.

We have not the advantage of knowing what their arguments were, and if we misjudge them the fault lies with the committee system and not with us. But on the face of things the case for prosecution seems unanswerable. We should uncommonly like to see the draft of the letter which any of the seven gentlemen named would have written to the coroner in reply to his communication. Some definite reason, we suppose, would have had to be given for not taking action. Rhetoric about the bad state of trade would not have been in place. We can hardly think they would have avowed that they disagreed with the interpretation of the law laid down by Lords Bramwell, Blackburn, Thesiger, and other authorities; that would have been hardly modest. There is no form of words in which it would have been easy to couch the very probable theory that action of this kind on the part of the Council will be unpopular among the members, and likely to deduct some of the annual guineas still remaining. That would have been a very good argument for taking away from the Pharmaceutical Council the power of initiating prosecutions; but it would have been more against the public demand that the law enacted should be carried out by somebody. There remain only, as far as we can see, the possible pleas that the victim was only a servant-girl, and that if she had not got the poison at one shop she could have got it at another; but it seems to us that neither of these would have had much weight with the coroner, or with the Privy Council, to whom the letter would have certainly found its way. All the real objections to prosecution are more or less obviously analogous to the one so crudely expressed by one of our correspondents on a previous occasion—"Am I to get up from dinner every time a pennyworth of paregoric or a pound of arsenic is asked for?"

It seems to be doubted in some quarters whether the law really does require the actual seller of a poison to be a qualified chemist. A correspondent, writing to us privately, says:—"Whatever may be the present interpretation of the Act, when it passed it was quite understood that the owner of the pharmacy was the seller, just as the builder is responsible for the house built by his workmen, though he may never have touched a brick with his own hand." This gentleman does not give any authority for his statement as to the general understanding in 1868. Whatever that may have been, the internal evidence of what was intended by the persons who framed the Act is unmistakable. Section 15 expressly says that any unregistered person who sells or keeps open shop is liable to the penalty. Clearly the conditions are alternative. In the 17th section, which prescribes the labelling, &c., it is said that "*for the purposes of this section* the person on whose behalf any sale is made by any apprentice or servant shall be deemed to be the seller." Evidently it is assumed that in other sections the seller is the person who sells. And this is quite in accordance with other legislation of the same character. The Arsenic Act, for instance, requires that the signature of the seller shall be attached to the record of each transaction. A careful reading of that Act will show that the person who sells is necessarily the seller there; otherwise the Act would be prescribing forgery.

No doubt a certain amount of inconvenience would result

among certain chemists and druggists by the rigorous enforcement of this rendering of the Act; but we think it is an inconvenience which persons who accept the responsibility of dealing in poisons ought to be willing to submit to. The Act is a palpable absurdity if its essential principle can be set aside by any druggist who chooses to employ the first Dick, Tom, or Harry he meets to dispense his poisons. At the same time the duty of enforcing this provision is generously left to the Pharmaceutical Society. Their discretion in regard to chemists is expected, as well as their due consideration of the public safety. We do not think they would be called upon to prosecute every unqualified assistant who should sell a pennyworth of paregoric, but they have no right, on account of their possible unpopularity, to neglect their duties towards the public, as they did a year ago in the Lewisham liquor-strychnine case, and as they probably would have done this time if the Surrey coroner had not cornered them.

But, if we applaud the policy of the majority of the Council in regard to this prosecution, we are bound to condemn the manner in which they arrived at their decision. The new departure thus inaugurated concerns the livelihood of thousands of chemists. There could be no pretence that the topic was a private one, for the details of it have been published throughout the kingdom. Its discussion in committee is, in spirit, a breach of faith with the Council's constituents, and invites them, and still more the outside chemists and druggists, to exercise their influence on the first opportunity to get the administrative power now in the hands of the Council removed to a more trustworthy body.

PHARMACISTS STARRING.

OUR pages this week are largely occupied with reports of the addresses delivered at Dundee, Birmingham, and Sheffield by Mr. Gilmour, Mr. Wyley, and Mr. Atkins respectively. To the feast of good things thus provided chemists will not need a pressing invitation. The three gentlemen we have named have long attained to the moral, intellectual, and commercial reputation which ensures for their utterances wide and respectful attention. The addresses now reported will certainly not detract from the reputation they already enjoy. Each address was admirably suited to the circumstances amidst which it was delivered, and the substance of the three discourses is sound, the teaching conveyed unexceptionable, and the matter sufficiently varied to make all of them worthy of careful attention.

Our only ground of complaint with these addresses, indeed, is that they afford but little basis for discussion, and not much for criticism. The authors might reasonably answer that they were not prepared or spoken for journalistic benefit, though it may be assumed that each orator had in his mind a somewhat larger audience than the one actually before him. A few thoughts, however, inevitably suggested by perusing them, may be indulged in. We do not wish to say anything disrespectful to the rising generation of pharmacists, the bright morning stars before whom, as we are so often reminded, we shall soon enough have to pale our ineffectual fires. These young gentlemen are, no doubt, of considerable importance in the body pharmaceutic, but we are not sure that there is not a shade of a tendency to make a little too much of them. The instances before us are to the point. The Dundee Association of Assistants and Apprentices which had the benefit of Mr. Gilmour's advice is the successor of a defunct body. It is pushing along gloriously just at present, but it must be remembered that it is as yet living chiefly on the glory which it is going to achieve. Mr. Wyley,

at Birmingham, has to plead for pupils to come and be benefited. The teachers are ready, and every provision has been made for them, but in that great city and centre a respectable-looking class of students cannot be got together to accept education at less than cost price. "The association has not met with the encouragement it deserves, not from faults of its own, but from a lack of pupils ready and desirous of being taught." The case is somewhat different at Sheffield. The pharmaceutical classes there are, according to Mr. Atkins, notable for their "rapid growth, the surprising increase in the number of students, the high percentage of attendance, and, as a result, the substantial character of the work done." Mr. Atkins is the most accomplished complimentary in our ranks, but even he, in an adjoining paragraph, hints at a weak spot in the Sheffield school. It is manifest in "the inadequately remunerated self-sacrificing services of the teaching staff," and he rightly warns the students that they "cannot expect a perennial supply of such instruction on such terms." Why should these students expect anything of the kind? They have no right to claim self-sacrifice, and we are not sure that they are likely to be the better for it if they get it. The self-sacrifice of the teachers, the provision of education at less than it is, or ought to be, worth, becomes a system of bribery, which in our opinion tends to demoralise both those who give and those who receive.

There are many admirable points in Mr. Gilmour's address. His hints to debaters are in every respect appropriate, and are applicable to many speakers other than juniors. This world would be a much happier place to live in than it is if speakers would limit themselves to saying and writing only what is to the point. The applause given to an elaborate essay is often, as Mr. Gilmour says, only the expression of gladness that it is finished. There is a good deal of wisdom in the advice, which we gather from a subsequent part of the address, to keep oneself short of money by investing in books. Satan, Mr. Gilmour says dryly, finds plenty of mischief for full purses as well as for idle hands. Best of all is the hint gathered from the chemical factory, which has to pay its dividends out of the utilisation of waste. It is by properly using the waste in all our lives—the waste moments, the waste pence, the waste thoughts—that the best profit is realised in the end.

Mr. Wyley finds the trade in a transition period. Was it ever, or can it ever, be otherwise? But to him, as to all other intelligent observers, the idea which a survey of present-day tendencies suggests is the absolute necessity of closer, deeper, and more extended study. In the promotion of trade interests he shows how effectively local associations could aid the body generally if they were organised and drilled for that purpose, and he evidently holds strong views on the rightful claim of British chemists and druggists to an approach towards the greater share of protection enjoyed by Continental pharmacists. He has an excellent opportunity, as President of the Midland Counties Chemists' Association, of showing that some such result can be unitedly worked for, if not attained. As Mr. Wyley himself asks the apprentices, "Why leave all to some future date?" We quite agree with Mr. Wyley that "increased education is a necessity of the times," but we do not see the good of it if it is not to be made use of. Mr. Wyley thinks it is "extremely problematical" if chemists will get special scientific work to do to any great extent. He thinks the specialists in each department of science will do it all so well as to leave pharmacists no chance. In this we do not agree. There are, and will be for many years, hundreds of towns where a special scientific man could never earn a living, but where a scientifically-trained pharmacist could pick up a good many

guineas and half-guineas. That is where, it seems to us, the benefit of the higher education is to come in.

Many of Mr. Atkins's remarks run curiously in the same groove as those of Mr. Gilmour. In their advocacy of a definite aim in life, of observation and reflection, of a love of books, of a hobby, they get very near to each other, even in words. We do not intend to weaken Mr. Atkins's remarks by abstracting or diluting them. As always, in his speeches the high tone is tempered by a sufficiently reasonable regard for the practical necessities of work-a-day life, while of neither the past, present, or future of pharmacy can he find it in his heart to say an unkind word. For his amiable belief in and love for the "much misunderstood and even more abused" institution at Bloomsbury Square we cannot help entertaining some respect. His trustful confidence in the virtues and wisdom which characterise himself and his twenty colleagues in the face of "the palpable fact of widespread unpopularity" are almost heroic; but we venture to doubt whether it is quite fair for a monitor of such influence as Mr. Atkins to urge those young men at Sheffield to recklessly spend their bottom guineas in support of an establishment which does its good works so secretly that even its ex-vice-president gives no single indication of what they are when he appeals for "sympathy and support."

COMMERCIAL TRAVELLERS.

"WHEN thou doest well for thyself men shall praise thee." As a rule, the praise under the circumstances is deserved. Most men who do well for themselves possess some sterling qualities, and we are quite sure that Lord Mayor Whitehead is full of virtues. He was once, it appears, a commercial traveller, and on Saturday last he was presented with a bust of himself, subscribed for by more than a thousand gentlemen who claim a sort of commercial kinship with him on that account. His lordship is, as we have previously stated, somewhat associated with our own trade; that is to say, he, with six ladies and gentlemen, has qualified himself by incorporation to take the title, the profits, and the responsibilities of a chemist and druggist. We have advocated that the Pharmaceutical Council, as representing the otherwisely qualified members of the trade, should, during his year of office, have presented the right honourable gentleman with a testimonial in the form of a summons, by which the legality of the incorporation proceeding might have been tested in a sufficiently prominent manner. As usual, our advice has been neglected by those who alone are in a position to follow it, and the logical consequence of disadvantage to the trade is the result.

The Lord Mayor seems to have an extremely good opinion of Mr. James Whitehead as a commercial traveller. In his speech acknowledging the presentation he said "he used to work early and late; there was no cessation to his toil, and, so far as his duties to his employers were concerned, he never allowed anything to interfere between them and success. He used to make it a rule when he was on the road to travel when his customers were asleep or when they were having their meals, and he took his chance of obtaining the sustenance that all required whatever their positions in life were. The pace in those days was, as far as he was concerned, something terrific. When he remembered what took place when he was on the road, it was a marvel to him that he was alive to-day to tell the tale, but he was happily blessed with a good and strong constitution, and, although he exerted himself to a very great extent, and far beyond what he ought to have done, he was, thanks to God, present now, and capable, he believed, of doing work not altogether unworthy of commercial travellers."

The present Lady Mayoress, it appears, snatched him from this terrific toil some thirty years since, and it may be assumed that Mr. Whitehead found a way of getting his living in a somewhat less exhausting manner. Since his elevation to the aldermanic estate he has probably obtained the sustenance required at something more than regular hours.

The conditions of a commercial traveller's existence have considerably changed in many respects for the better. The old autocrats of the road are nearly, if not quite, extinct; their gigs or saddle-bags are things of the past, and the mystic enjoyments of the commercial-room at the hotel are to a large extent abandoned. If, however, railways have made a traveller's journeyings easier, competition has certainly made order-getting a harder business. Under the old order the few travellers who came to country towns were recognised and welcome friends; they were real powers for their houses, who stood in wholesome fear of them. The traveller nowadays has to get accustomed to the cold shoulder, and often mustard sauce. Some principals of shops, generally the so-called high-class ones, make it a rule to be curt to travellers. Probably they find it dangerous to be courteous, for many representatives make it a point of honour not to take anything short of the most emphatic "No" that can be uttered. Smaller men have often better reason for getting a little crusty when the well-dressed smooth-tongued gentleman appears at their counter, and turns out to be a seller and not a buyer. "I have had three customers and five travellers this morning already," was the bitter answer of one poor chemist to his latest tormentor, as he relapsed into the prosecution of what Mr. Gilmour calls his "high vocation."

The traveller's influence, too, in these times is much less than it was; it is often much less than he thinks it is. Direct personal acquaintance must count for something, but modern firms do not let themselves be at the mercy of any representative, however able. Buyers, too, are much keener, as they are obliged to be. Moreover, advertisements are crowding the traveller, though they aid him also. They are, like the Lord Mayor, incessantly at work; they travel while other people are asleep, they never get drunk, never embezzle, and are steadily, if insidiously, promoting their authors' interests in all the four corners of the earth at the same time. They cannot at present replace the traveller entirely, but the time is coming when both sellers and buyers will perceive that it is to their mutual advantage to communicate in the least expensive manner, and commercial travellers are certainly not economical.

The Ford-Shapland Prize. It will be remembered that Messrs. Ford, Shapland & Co. lately offered, through this journal, 15*l.* in three prizes to chemists or chemists' assistants for novel designs suitable for chemists' handbills. They had some admirable designs sent in, and the whole were submitted to two skilled judges for the selection of the prizes. Messrs. Ford, Shapland & Co. appointed Mr. J. R. Brown, an artist on the *Graphic* staff, and we at their request nominated Mr. F. W. Fletcher, F.C.S., of the North London Chemical Works, of whose taste and judgment in the production of effective advertisements we had had experience. Those gentlemen spent an afternoon at our office last week in the examination of the designs, and the following report is the result of their scrutiny:—

Messrs. Ford, Shapland & Co.

Gentlemen,—At the joint request of yourselves and the Editor of THE CHEMIST AND DRUGGIST, we have carefully examined the designs sent in for your "Chemists' Handbill Competition."

The selection of the best three designs has been by no means an easy task. The majority of the drawings bear

evidence of much painstaking, thoughtful work; many are original, some appropriate, and not a few possess true artistic merit. We should have experienced still greater difficulty in making the award had the conditions of the competition been more strictly adhered to. Many designs, excellent in other respects, were disqualified owing to the employment of more than two colours, whilst others exceeded the specific measurements, both being voluntary departures from the regulations for which it is difficult to find an excuse. Taken as a whole, however, the results of the competition must be regarded as highly gratifying, revealing as they do a "potentiality" of art as applied to a handbill which requires only development to ensure the transformation of many dull uninteresting advertisements into veritable "things of beauty." The design to which we have awarded the first prize combines the three essentials of "excellence of work, originality, and appropriateness." The competitor to whom we have adjudged the second place contributed three specimens. Both in conception and artistic finish his designs were of the highest possible merit, but with one exception their connection with pharmacy was, to say the least, remote. For the third place of honour the struggle was a tough one. Several deserved the prize, and we regret that only one could win. The selected design is, in our opinion, *ceteris paribus*, the best in point of execution.

The following are the *noms de plume* of the successful competitors:—

"Speranda" (E. J. Barrow, Messrs. Jeffrey & Son, Cheltenham), First Prize.

"Inventor" (R. F. Reynolds, Headingley, near Leeds), Second Prize.

"Nautical" (J. F. Golding, 172 Albany Street, N.W.), Third Prize.

Of the remainder we have recommended the following six for honourable mention:—

"Erica,"

"Mulstan,"

"Oxonian,"

"Palm Leaf,"

"In Deo Confident,"

"Phrenologist."

We cannot conclude without expressing our admiration of the exquisite workmanship displayed in the design contributed by "I'll Try," and marked "Not for competition."

(Signed) FRED. W. FLETCHER.
J. ROBT. BROWN.

Gazette.

PARTNERSHIPS DISSOLVED.

Atkinson, J., & Sons, Liverpool, soap manufacturers.

Biddell Brothers, Southwark Street, S.E., hop merchants and isinglass importers and malt exporters.

Webb & Fox, Wood Green, N., general medical practitioners.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Critchley, William, Bolton, mineral-water manufacturer.

Roberts-Dudley, Frederick John, Stalybridge, surgeon.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Critchley, William, Bolton, Lancashire, mineral-water manufacturer—Oct. 14, 16 Wood Street, Bolton; Oct. 21, County Court, Bolton.

Roberts-Dudley, Frederick John, Stalybridge, surgeon—Oct. 18, Official Receiver's office, Manchester; Oct. 31, Town Hall, Ashton-under-Lyue.

ADJUDICATIONS.

Critchley, William, Bolton, mineral-water manufacturer.

Hillier, H. J. (trading as the Oil of Sahara Company, and as J. Belleine & Co.), Praed Street and Edgware Road, W., manufacturer of the Oil of Sahara.

NOTICES OF DIVIDENDS.

Leon, Marcus (trading as Marcus Leon & Co.), Grosvenor Road and Claverton Street, Pimlico—first and final div. of 2*d.*, any day, Chief Official Receiver's offices, 33 Carey Street, Lincoln's Inn.

Mauchlen, Robert, South Shields, chemist and druggist—first and final div. of 6*s.* 1*d.*, Oct. 9, Official Receiver's office, Newcastle-on-Tyne.

ORDER ON APPLICATION TO APPROVE SCHEME.

Simpson, Thornton Gerald, Victoria Road, Hackney Wick, and Hackney Road, physician, carrying on business at Hackney Road, in partnership with W. G. M'Fee, under the style of Simpson & M'Fee—composition of 2*s.* 6*d.*

Notes of Novelties.

GRAVINA.

MESSRS. FREDERICK KING & Co. (Limited), of Belfast, the makers of Edwards's desiccated soups, have introduced, in the form of a fine powder, a combination of meat and vegetable extract, which, with the addition of a certain quantity of boiling water, makes a soup of excellent flavour and substance. The powder is supplied in tins, and will keep unimpaired for any length of time. Its convenience and economy recommend it. A pinch of it added to any gravy will much increase its richness and flavour.

CARNABYN.

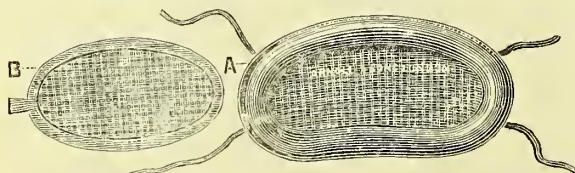
THIS preparation, which is manufactured by Messrs. Hooper & Co., the well-known Pall Mall chemists, has now been before the public for a number of years, and has been received with considerable favour by the medical profession. It is a scientifically-prepared wine of beef and malt, in which the nourishing and digestive principles of these substances are retained in a state of perfect solution. The preparation is an admirable tonic and nutrient, and it is evident that the wine employed in making it is of a superior character. Carnabyn is handsomely put up in three sizes of bottles, and well deserves its rank as a standard article.

BYNO-HYPOPHOSPHITES.

MESSRS. ALLEN & HANBURY'S have just perfected and introduced a new tonic preparation which may be said to fill a blank in the well-occupied field devoted to hypophosphite remedies. This is a combination of fluid malt extract with certain metallic hypophosphites and the active principles of cinchona and nux vomica. The preparation is an amber-coloured fluid of syrupy consistency; it mixes clear and readily with water, but the taste of its medicinal ingredients is so well concealed by the flavour of the vehicle that children do not object to taking it alone. Byno-hypophosphites is put up in an exquisitely tasteful manner, and is just such a preparation which pharmacists can confidently bring under the notice of their medical friends, as well as phthisical and other patients who derive advantage from the administration of its active ingredients. We might term it, in brief, a perfect winter tonic.

ARNOLD'S SANITARY RESPIRATOR.

NEW forms of respirators have not been so frequent of late as they were some years since. The one patented by Messrs. Arnold & Sons, of Smithfield, has some features of undoubted value. The framework is formed of a soft and flexible metallic substance which is covered with silk. This



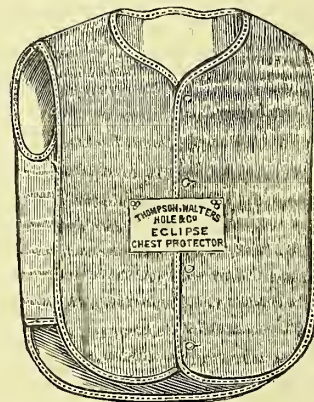
can be fitted by pressure to any mouth, so as to ensure full protection. The outer air is inspired through a diaphragm of woven horsehair covered by silk. This material is non-absorbent, and the respirator is so constructed that the diaphragm can be slipped in and out for cleaning, or at any time a new one can be substituted.

WARNER'S ANTISEPTIC PASTILLES.

FOLLOWING a suggestion recently made by Dr. C. Seiler in the *Medical Record*, Messrs. William Warner & Co., the well-known pill and compressed pastille manufacturers, of Philadelphia, are now placing on the market antiseptic pastilles for the treatment of certain nasal affections. These pastilles are not only powerfully antiseptic and comparatively innocuous, but also distinctly deodorant, as sodium bicarbonate, sodium bichlorate, sodium benzoate, sodium salicylate, menthol, and oil of wintergreen enter into their composition. One of the pastilles makes 2 oz. of a lotion or spray for the nostrils, and it is, according to Dr. Seiler, "sufficiently alkaline to dissolve the thickened secretion adhering to the nasal mucuous membrane, and as it is of proper density, it is bland and unirritating, leaving a pleasant feeling in the nose. As an antiseptic and deodoriser it is also far superior to Dobell's solution or any other non-irritating deodoriser and antiseptic." The pastilles are introduced here by Messrs. F. Newbery & Sons, of King Edward Street, E.C.

"ECLIPSE" CHEST PROTECTORS.

THE drawing below represents a new vest-shaped chest protector which is brought before the trade by Messrs.

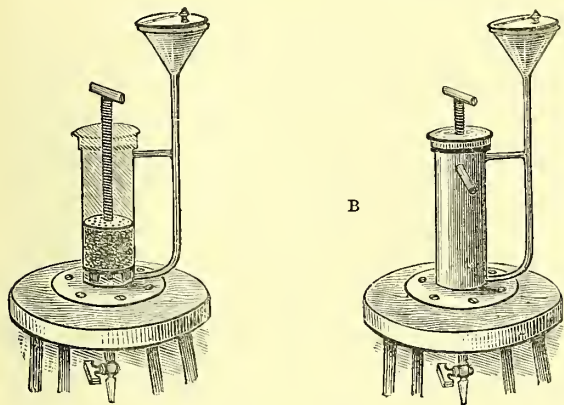


Thompson, Walters, Hole & Co. (Limited), of Curtain Road. It is made in felt in all the usual sizes, and its complete character gives a comfort and protection to the wearer which will certainly be appreciated.

TEBBUTT'S PERCOLATOR AND PRESS.

A CORRESPONDENT last week called the attention of our readers to the superior results which he had obtained in making tinctures with a new percolator based on the "upward" principle. Meanwhile we have had an opportunity of examining the apparatus and judging its capabilities of producing tinctures in an economical and efficient manner. The percolator is, we may say, the invention of Mr. Frank Tebbutt, 22 Langdon Road, N., and is the result of a little mental recreation during the enforced idleness of a period of indisposition. The form of the apparatus is shown on the next page, A being a sectional and B the outside view. The cylinder or percolator is a tin tube about $2\frac{1}{2}$ inches in diameter and 7 inches deep. It is tapped at the bottom, and is provided with an outlet tube an inch or more from the top. The cover of the cylinder is made of brass, and fits on a screw of the same metal attached to the cylinder. Through the cover a screw rod passes; this is the essential part of the press. It will be noticed that a funnelled tube proceeds from the bottom of the percolator upwards. The

apparatus is further supplied with a false bottom, as well as perforated and solid plates to fit over the marc. The manner in which the percolator is used is as follows:—The tap at



the bottom is closed, the perforated plate inserted, then the marc, and the second perforated plate covered with a piece of filtering-paper is placed on the top of the marc. The brass top is then fixed on, the top plate is screwed down tightly, and a part of the menstruum then poured in the funnel. After standing for twenty-four hours percolation is commenced, and continued with more of the menstruum until the whole of it has been used up. The solid plate is now put in the place of the perforated one on the top of the marc, the tap opened, and the marc, for an hour or two, placed under strong pressure. After draining, the tap is closed, the solid plate removed, and water equal to twice the volume of deficiency of the tincture is used to displace the spirit remaining in the marc. Our last week's correspondent spoke highly of the practical utility of this apparatus, and the specimens of tinctures and exhausted marc which have been submitted to us amply demonstrate its efficiency. The advantages which the percolator possesses over others constructed on similar principles are—(1) the smallness of the percolating cylinder, which necessitates treatment with successive portions of fresh menstruum; (2) a minimum of hydrostatic pressure only is employed, so that percolation is not materially forced; and (3) the conjunction of the screw is a valuable aid to exhaustion of the marc. Amongst the advantages which the percolator possesses over percolators generally are that finely-powdered drugs are not required; displacement of the residual tincture with water is accomplished without mixture of the two fluids, and the tincture as it leaves the percolator is bright, and does not require to be filtered. The apparatus is so simply constructed that it is not liable to go out of order; it does away with the necessity for a tincture-press, and may even be used as such; moreover, it is cheap. These are all virtues which indicate that Tehhutt's percolator will be a favourite with the craft.

General and Provincial News.

JOHN J. GRIFFIN & SONS (LIMITED).—Messrs. John J. Griffin & Sons, philosophical and chemical instrument makers, of Garrick Street, Covent Garden, have converted their business into a limited company under the above style, with a capital of 10,000*l.* in 1*l.* shares. Messrs. Thomas Briggs and Thomas McKinnon Wood are the first directors. Their remuneration is to be 20*l.* per annum, and 1*l.* 1*s.* for each attendance. The first subscribers to the company are:—Miss Josephine Griffin, 47 South Hill Park, N.W.; A. J. R. Goderson, 54 Palmerston Buildings, articled clerk; T. Briggs,

8 Oat Lane, silk merchant; J. Mutch, Alpha Road, Millwall; H. Hamilton Fox, 13 Cromwell Crescent, South Kensington; John R. Griffin, 22 Garrick Street, scientific instrument maker; and E. A. Miller, 80 Coleman Street, E.C., solicitor.

THE AUSTRIAN APOTHEKER VEREIN has met in Vienna during the past week, and among the reports laid before it was one on the adulteration of food. In January the Verein founded a laboratory in which foods and liquors are analysed gratis, although the establishment has not attracted public attention, and only 229 specimens of suspected articles have been sent in for examination. Amongst those examined were the following:—A new product, advertised extensively in Austria, called "Malt Extract Cognac," which was found to be wort, mixed with a little alcohol and sugar. A loaf of bread sent from Salzburg consisted largely of powdered hark, sawdust, and chaff. Pepper was found to be mixed with wood ashes. Cinnamon was coloured with ochre. Pimento was mixed with maize flour. German yeast contained 50 per cent. of potato starch. "Nutritious coffee" consisted largely of roasted acorns and chicory. Milk was found to be milk and water generally. The director of the laboratory reported that the short experience he has had of the adulteration of food shows him that it is generally resorted to by the retailer, and not by the wholesale trader.

CARBOLIC-ACID POISONING.—We have previously reported the death of Robert Hill, an employé of the Rochester Corporation, from carbolic-acid poisoning. He had a bottle of whisky in one pocket and a bottle of carbolic acid with which to disinfect some premises in another. Both bottles were similar in shape, and the man drank some of the carbolic acid in mistake, and died from the effects. At the inquest Dr. Foulerton, surgeon at St. Bartholomew's Hospital, expressed his opinion that the utmost care should be exercised in dealing with such a deadly poison. An effort had been made to get the Home Secretary to include carbolic acid in the poisons schedule, but it was stated that, as a large quantity of carbolic acid was sold, to place limitations upon it by scheduling it would affect the interests of trade. It was worse than most other poisons because it did not cause vomiting. In one month at Liverpool there had been no less than seven deaths from this poison. People drank from a bottle and swallowed the acid before they smelt it. The jury expressed an opinion that if the poison was not scheduled there ought at least to be some precaution taken as to the vessels used, and they suggested that it should be kept in specially made tin bottles with screw stoppers.

CHARGES.—At Bow Street, on Saturday last, Mary Ann Lullam, a patent-medicine vendor, of 19 New Oxford Street, and Arthur Lullam, her son, were charged with assaulting Mr. Claridge, a broker, who had been instructed to distrain on the female defendant's goods for rates due. There was a further charge for assault on Police-constable 393 D, who went to the broker's assistance. Each of the accused were fined 3*l.* and one guinea costs.—At the Westminster Police Court, on Tuesday last, Henry Walker, 23, *alias* "the Masher," clerk, and Arthur Simcox, same age, *alias* "the Doctor," chemist's assistant, both well dressed, were charged, on remand, before Mr. Shiel, with being concerned with men under remand at Dalston Police Court, and others at large, with cashbox robberies all over the metropolis and suburbs. The first case taken was that of stealing a cashbox containing 7*l.* 10*s.* from the office of the Army Floral Association, Eccleston Street, Pimlico. Simcox, it was stated, drove up to the shop in a trap, called the manageress out, and entered into conversation with her about some purchases, while a man, believed to be Walker, went into the shop and stole the cashbox. Simcox was further charged with taking a cashbox containing 11*l.* from the shop of Mr. Joseph Darly, of Bromley, and also with stealing 2*l.* from the till of Mr. Turner, chemist, of 20 Bury Street, Bloomsbury. On the first charge both prisoners were committed for trial, and on the others they were further remanded.

COMMERCIAL TRAVELLERS AT THE MANSION HOUSE.—A very large gathering of commercial travellers assembled at the Mansion House on Saturday last to present the Lord Mayor and Lady Mayoress with a marble bust of the Lord Mayor. This work of art, in Onslow Ford's happiest style, has been on view at the Royal Academy. It was subscribed for by over 1,000 commercial travellers, as a mark of esteem.

from his former colleagues. It was unveiled by Mr. D. R. Harvest, who, in a few appropriate words, presented it on behalf of the subscribers. The Lord Mayor replied in a genial and hearty manner, relating many of his early experiences, and mentioned that the Lady Mayoress had objected to marrying a man who was so much away from home, or he might still have been on the road. Short and characteristic speeches were made by the Mayor of Leicester (Alderman E. Wood), Mr. J. E. Alger (chairman of the London Commercial Travellers' Society), Mr. Onslow Ford, A.R.A., Mr. W. W. Thompson, Mr. A. Machin (chairman of the Commercial Travellers' Schools), and Mr. A. P. Allen (hon. secretary of the Presentation Committee). The company then adjourned, and were hospitably entertained by the Lord Mayor and Lady Mayoress. Many of the "ambassadors of commerce" who call upon chemists and druggists were present, and a French lady-representative, Madame Rieu, travelled from Manchester on purpose; she and several other ladies present were afterwards introduced to the Lord Mayor and Lady Mayoress.

DEFENDING HIS CHARACTER.—Mr. William Bicknell Edgeler, chemist, of Petersfield, sells beer as well as physic. Captain William Henry Fawcner, R.N., of Liss, one of his customers, went into Mr. Edgeler's shop on September 17, and said, "I do not like this beer you sent me. It appears like lager beer, and, in fact, I am inclined to think it is not Allsopp's beer." Mr. Edgeler interpreted the remark as a reflection on his honesty, and two versions of the resulting discussion had to be heard by the magistrates. The captain said the chemist clenched his fist, and, leaning across the counter, placed it close to his nose in a threatening attitude, saying, "There is the door. Go out of my shop, and I dare you to enter it again." Some conversation took place near the door, and the captain was forced into the road. Mr. Edgeler first expressed to the magistrates his regret that he had lost his temper, but explained that the captain came to his shop complaining of the quality of the beer, and, as a tradesman, he naturally expressed regret that it was not giving satisfaction, when complainant said it was lager beer and, he believed, did not come from Allsopp's at all. He said to him, "If by that remark you mean I am a dishonest man you are no gentleman, and there is my door. The sooner you get out the better." To more fully emphasise the remark, he pointed with his hand to the door, but he did not put his fist in complainant's face. On leaving the shop he put his foot to the door so as to prevent complainant's return. The magistrates were of opinion that a technical assault of the smallest possible nature had been committed. No doubt both had lost their tempers. Under the circumstances they thought the smallest fine would meet the case, and Mr. Edgeler was ordered to pay 1s. and 9s. costs.

ANTISEPTIC VENTILATION.

A PAPER was read at the recent Sanitary Congress at Worcester by Mr. S. M. Burroughs, on "Antiseptic Ventilation for Hospitals and Sanitoriums," in which he described and illustrated an invention or system the object of which is to first filter the air, then to regulate its temperature, then to propel it to any room desired, and lastly to render it antiseptic. He had selected the system of the Sturtevant Blower Company of London as being most suitable for the application of his invention, because it can be made to blow air to any part of a building by means of sheet-iron or tin pipes.

The blower consists of a revolving fan having several blades parallel to the axis. It can be run by a steam-engine, which can also be utilised for lifts, electric lights, centrifugals in laundries, mills for grinding, &c. The waste steam from the engine supplies the heat, excepting perhaps for a large building, when it can be supplemented by live steam.

1. The air can be drawn down a chimney or shaft, and is filtered through a coarse strainer to remove the larger particles, and through finer material to take out fine dust, fog, and smoke.

2. If the air is of the right temperature it is drawn directly into the blower, but if it requires to be heated, a damper

directs it into a rectangular box of sheet iron packed with tubes containing waste steam from the engine, or live steam from the boiler, or both. In circulating round these tubes the air becomes heated, is drawn through the blower, and propelled through main and branch pipes to any or every part of the building.

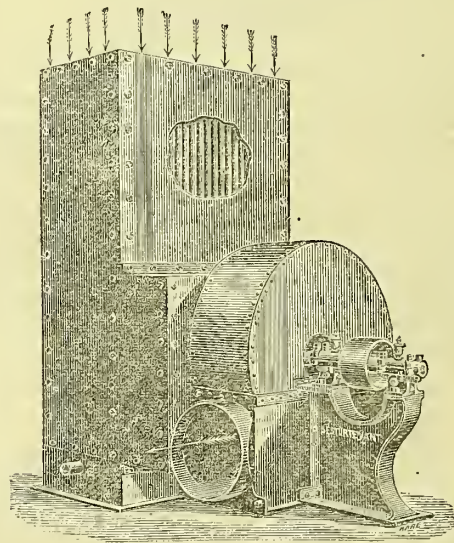
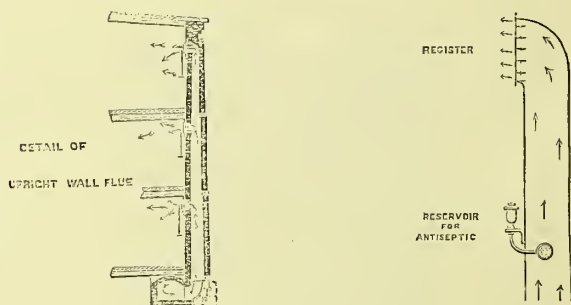
3. If only one antiseptic or air medication be desired at one time it may be distributed from the main pipe, but a different medication can be used for each room if required.

4. A volatile antiseptic may be conveniently introduced by means of suitable mechanism, by means of which the liquid can be made to drop regularly in pure sponge or other absorbent or distributing material, whence it is readily absorbed by the current of air. Carbolic acid, creolin, pinol, pumiline, terebene, eucalyptia, thymol, or other volatile antiseptic can be readily employed in this manner.

5. If the air is too moist or too warm, it can be both dried and cooled by causing cold water to pass through the pipes referred to instead of steam. The object of the invention is to enable hospital physicians to exactly control the temperature and to medicate the air, having previously deprived it of dust, &c.

The apparatus is not secret or patented, and can be used freely by anyone.

It constitutes the most economical system of heating, and for ventilation is most effectual; while for the antiseptic treatment of consumption and germ diseases, also for making antiseptic the surgical wards of hospitals, it possesses advantages over inhalers and personal appliances, which interfere more or less with natural breathing.



The paper was very favourably received, and a discussion followed in which Sir Douglas Galton took part, he considering that the Sturtevant ventilating system would be of much service in the heating and ventilation of schools, where the air was usually very foul. The president of the section also thanked Mr. Burroughs for his paper.

Personalities.

MR. B. K. BIDDY, chemist and druggist, of St. Vincent, West Indies, is at present in London, and may be addressed at 23 Lancaster Road, Notting Hill, W.

MR. JOHN MCKESSON, JUNR., of New York, is at present in London, and was on 'Change on Thursday, comparing notes with the representatives of the London drug trade who met him there.

THE chemist's business so successfully carried on for many years by Mr. Witherington, and lately by Mr. Coles, at Foregate Street, Worcester, has been purchased by Mr. J. Hinks, of the Cross, Worcester.

MR. J. W. REELER, principal of the old-established firm of Reeler & Son, chemists, Capetown, is staying in London at present, and may be addressed at 2 Douglas Villas, Greyhound Lane, Streatham Common.

WIDESPREAD regret was occasioned at the beginning of the week by the announcement of the suicide of Sir Tindal Robertson, M.P. for Brighton. The matter is recorded here as the deceased gentleman backed the Pharmacy Bill of last session, and his figure was not unfamiliar in pharmaceutical circles. Sir Tindal Robertson was a medical man when he lost his eyesight. Recently he had been in poor health.

AFTER occupying the position of people's churchwarden for the parish of Strood, Kent, for seven years, Mr. James Steven, chemist and druggist of that town, has had to resign that position because of the state of his health. As an indication of their esteem the parishioners have presented him with a beautifully illuminated address and a handsome black marble clock mounted with gold and bronze figures.

MR. JOHN McDUGALL, a member of the London County Council, has brought down upon his head the wrath of metropolitan music-hall votaries. Mr. McDougall is a chemist, and has made his fortune in the manufacture of purifying compounds, disinfectants and sheep-dip, to wit. Now he has turned his attention to the purification of music-hall morality, and such places as the Aquarium and Trocadero are in danger of being refused renewal of their licences. Mr. McDougall is being much abused for his action, on the ground that his inexperience of music-hall morals does not qualify him as a judge. Mr. McDougall is a native of Manchester.

Trade Notes.

WE asked last week who could heat the forty-one prize medals with which Messrs. J. S. Fry & Sons' cocoa and chocolate business has been decorated. Messrs. F. C. Calvert & Co. inform us that they have been awarded fifty-five gold and silver medals and diplomas.

MR. HICKISSON has discovered a new way of spending his profits and making more. With every 6d. bottle of his Crystal Palace marking-ink he gives a voucher, which entitles the purchaser to receive for 3d., to cover postage, &c., a very neat little mounted rubber-stamp bearing full name or monogram. These articles are really well made, and astonishingly cheap.

OTTO OF ROSE.—MR. R. C. Treatt, of Dunster House, Mincing Lane, E.C., has recently submitted to us a sample of the otto of rose which he imports from the distilleries of M. Iovtcheff, Kezanlik, Bulgaria. We have subjected the otto to stringent tests for purity, and are pleased to report that we find it to be a perfectly pure oil, its freezing-point being 20° C.—a standard which is scarcely excelled by commercial otto of rose—and the absence of such common adulterants as ginger-grass oil is clearly indicated.

JOHN DAVIS & Co. (LIMITED), of Old Kent Road, S.E., send us a proof of their "Domestic Year-book" for 1890. This is a really excellent compilation, typographically faultless, and illustrated in a fresh and artistic style. There is provision for five pages of the chemist's own matter, some of which might be let out to local tradesmen, and for a small charge space is provided for twelve advertisements at the

bottom of the calendar pages. The fault of such advantageous terms as these in regard to almanacs is that they are open to all, but John Davis & Co. undertake to supply only one person in a town, and that the first applicant. Those who will be first deserve to be congratulated.

MESSRS. FREDERICK STEARNS & Co., of Detroit, send us a new catalogue of their "non-secret medicines." It is a stylishly got-up book, containing over one hundred pages size of this journal. It describes and illustrates, and, of course, quotes for the numerous remedial, toilet, and miscellaneous goods put up for chemists' sale. The book teems with ideas, and manifests an intimate acquaintance with the requirements of druggists. Messrs. Stearns tell us that, except the paper, the printing ink, and the engravings, the whole of the work of this catalogue—composition, machining, and binding—has been done in their own establishment. It is a credit to any printer. We do not know how far Messrs. Stearns are disposed to distribute their work, but we know that most chemists would find it suggestive and valuable.

EUCALYPTUS PREPARATIONS.—A fortnight ago we referred to the popularity which eucalyptus products have acquired in the South of France and elsewhere. In this country the only firm, so far as we are aware, who have made these a special feature of their business is Messrs. J. Tucker & Co., of 51 Paddington Street, W., who send us their trade price-list of "Eucalyptus oil, red gum, and their preparations," the names of which alone occupy three octavo pages. We notice from this list that Messrs. Tucker & Sons keep all the best brands of eucalyptus oil, and that they make a speciality of surgical preparations in which eucalyptus oil plays a part. They send us several of their pharmaceutical and toilet preparations, which we have examined, and find to be satisfactory. The firm reprint "An Essay on the Essential Oil of the Eucalyptus, and its uses in medicine as an antiseptic, &c." (by M.R.C.S., L.S.A.), which those who wish to follow up the subject further should get a copy of.

MARRIAGES.

HUTCHIN—TURNER.—On September 17, at the Congregational church, Sawbridgeworth, by the Rev. James Wood, assisted by the Rev. J. Hutchin (father of the bridegroom), Llewellyn A. J. Hutchin, chemist, Cambridge, to Emily, younger daughter of Josiah Turner, of Hoskins', Sawbridgeworth.

SHILLCOCK—SEARLE.—On October 2, in the Chapel Royal, Savoy, by the Rev. Henry White, M.A., chaplain in ordinary to the Queen, George Shillcock, pharmaceutical chemist, of Bromley, Kent, to Louisa, eldest daughter of the late William Searle, of Chelmsford.

DEATHS.

HANKINSON.—On September 28, Mr. George Samuel Hankinson, chemist and druggist, Grange-over-Sands, Lancashire. Aged 58. By the death of Mr. G. S. Hankinson Grange-over-Sands has lost one of its oldest tradesmen. A native of Macclesfield, he went to Grange in the spring of 1867 as manager to the late Mr. Mackereth, chemist, and he had been for some time in business on his own account. He was held in high esteem in the village, both by residents and visitors. He was the secretary of a committee appointed five years ago to select a site for a cemetery. The site was duly selected and the cemetery formed, and now, singularly enough, his is the first body that has been interred in it. The Rev. J. Hankinson, brother of the deceased, officiated at the funeral.

WRIGHT.—We regret to announce the death of Mr. Alfred Wright, of Birmingham, for some years assistant secretary to the Chemists and Druggists' Trade Association of Great Britain, which took place on Sunday last at Ventnor. Mr. Wright had been suffering for some time from consumption, and went to Ventnor for the benefit of his health. We may add that he acted in the capacity of conjoint secretary with Mr. Thompson to the Midland Counties' Chemists' Association in the earlier part of the present decade, and was also the librarian of the Association for a few years.

WYLDE.—On September 26, Mr. Samuel Wyld, chemist and druggist, Walton, near Liverpool. Aged 44.

LIVERPOOL CHEMISTS' ASSOCIATION.

A MEETING of this association was held at the Royal Institution, Liverpool, on Thursday, Mr. A. H. Samuel, F.C.S., president, in the chair. There was a good attendance. After the minutes of the previous meeting had been read and other routine business disposed of, it was proposed that Mr. Charles Symes, Ph.D., should be the president for the ensuing year, to take office in January, and this was unanimously agreed upon.

MISCELLANEOUS COMMUNICATIONS

were then invited, and in response Dr. Symes said there were two matters he wished briefly to mention. In the recess Dr. Rentoul had communicated with him, and possibly with other members of the committee, on a matter in which he had much interested himself—viz., the relation of the present hospital systems to medical men and chemists, with proposals for reform. He thought the Council should consider at an early date whether it would not be well to ask the Doctor to occupy a meeting by reading a paper on the subject, or by placing his views before them personally in any way he might think best. The other matter to which he referred was the concluding part of the proceedings of the Pharmaceutical Council's meeting last week. He gathered from the report that it was proposed that a prosecution should be instituted against a chemist's assistant who, not being registered, had sold some rat-poison. He would not anticipate what shape the action would take, but he thought it tended to violate the principle of the personal qualification and responsibility of the proprietor, which was recognised when the Act was framed. He knew there was much to be said on both sides of the question, so much that he would not ask the members to go into it that evening, when there was so much else on hand; but he thought it unfortunate, that being a new departure, and of considerable importance to the whole trade, that it should have been dealt with in secret.

Mr. A. C. ABRAHAM said that as one who strongly opposed the decision of the Council to take the new departure which had been decided on, he was pleased that Dr. Symes had mentioned the matter, and he trusted it would be fully discussed by the association.

Thereafter Mr. E. Davies, F.C.S., read a paper on "Enamelled Cooking Vessels," a subject which he has specially studied in connection with the Maybrick case. Dr. Symes had meanwhile set agoing an

IMPROVED AUTOMATIC STILL.

This was made by Bracher & Co., of Wincanton. A year ago, when Dr. Symes exhibited one of these stills at a meeting of the association, there were some criticisms as to its automaticity, and some suggestions for improvements in its construction were made by Mr. Conroy and others. The maker had now adopted these, and it had become, Dr. Symes said, a really excellent piece of apparatus, and as nearly automatic as was possible by these and the addition of a tap and syphon. He thought it due to the members to show them the apparatus working, so that they might see how useful their very practical suggestions had been.

FIRST CHEMIST'S ASSISTANT: Where are you going, Squilly? Second C. A.: Going to buy a ring for my best girl. First C. A.: What's her name? Second C. A.: Alice. First C. A.: Ah! So you are going to digitalis. (Second brains him with a pestle.)

BROWN-SEQUARD'S ELIXIR OF LIFE has created great interest in the United States, both medical and lay press keeping up the interest by frequent allusions. The *Medical Age* hits the mark by publishing the results of experiments which have been made in Parke, Davis & Co.'s laboratory with solution of hydrochlorate of spermine, $C_9H_{17}N$, the basic substance obtained by Schreiner (1878) from semen, calf's heart, calf's liver, bull's testicles, and also from the surface of anatomical specimens kept under alcohol. This salt produced results similar to Brown-Sequard's injections, and the inference is that it is the spermine that does it.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., October 10.

THE improvement which generally commences towards the autumn has set in this week in the drug and chemical markets to a very perceptible extent, though speculative attention is as yet centred upon one or two articles only. Quinine has received the largest share of attention, and has advanced considerably, the mother-product, cinchona, being also dearer. In quicksilver first hands are lower and seconds higher than last week. Morphia is stiffening in sympathy with opium. Acetate of lead is dearer, and more interest has also been shown in cream of tartar and sulphate of copper. Many of the heavy chemicals, notably soda ash and crystals, bleaching powder, prussiate and chlorate of potash, bicarbonate of soda, and Chili saltpetre, are decidedly dearer in price. In drugs, saffron alone is obtainable at lower rates; cascara sagrada is unchanged; castor oil remains very dear; and star-anise, chamomiles, cassia, citronella, and peppermint oils (American and Japanese), and menthol have improved their position. Strophanthus, orris, and spermaceti are also dearer. In drysalteries the following are the principal changes:—Higher, or tending in that direction: Shellac, Kowrie resin, China galls, cochineal, dyewoods, sumach, cinnamon chips, chillies, and pimento. Easier: Linseed oil, petroleum, copal and damar resins, pepper, mace, Zanzibar cloves, and common Cochín ginger.

PROPOSED FRENCH EXHIBITION IN LONDON.—Steps are now being taken to follow up the Spanish Exhibition, which has turned out such a failure, by a show of French products at West Kensington next year. The French Minister of Commerce has been approached by a number of French manufacturers on the subject, and has promised his assistance to the realisation of the project. The Italians also want to hold another Exhibition in London next year, but it is said that the financial results of last year's show were not sufficiently encouraging to induce the promoters of that enterprise to try another.

NEW JAPANESE PORTS FOR FOREIGN TRADE.—The Japanese Government have just taken an important step in the interests of the foreign trade of the country, although at present foreigners are not entitled to participate directly in the privileges granted. By Imperial decree nine of the principal non-treaty ports are declared open to foreign export trade, with certain limitations. Japanese merchants may charter foreign vessels and despatch them to any of these ports to carry abroad cargoes of certain staples. Hitherto, Japanese subjects were not allowed to charter foreign vessels to sail from other than the five treaty ports, to which, in consequence, the total foreign trade of the empire was confined. In future the staples indicated may be exported from the nine specified ports, which are scattered all over the coasts, and are the natural outlets for large productive areas. As soon as the new treaties with foreign powers come in operation permitting free trade and residence to foreigners all over the country these and all other ports in the empire will, of course, be opened freely to foreign vessels for imports and exports.

BILLS OF LADING.—There has been some excitement in commercial circles this week about the practice alleged to exist in some quarters of giving a letter to the captain of the vessel by which certain goods are shipped, holding him free from claims in consideration of his giving a "clean" bill of lading for the goods shipped, i.e. omitting to record the fact that some of them have been received in a more or less

damaged condition, badly packed, or otherwise injured. The agitation has been started by the secretary of the Sydney Underwriters' Association, who has sent a letter to his colleague of the Institute of London Underwriters, informing him "that several cases have come to light lately of goods damaged previous to shipment in the United Kingdom being found covered by a clean bill of lading upon their arrival in Australia. Such letters, he states, open up the way to serious frauds on the holders of bills of lading signed under such conditions, as well as on the underwriters, and he considers that full publicity should be given to this matter, and the gravity of the offence pointed out to shippers and ship-owners in England. The secretary of the London association has sent a copy of the letter from Sydney to the leading banks, who are among the parties most interested in the question, the excuse for giving letters of indemnity being that bankers will not advance money upon a qualified bill of lading containing a true statement of facts.

ACIDS.—*Citric* remains dull, with very little business, at 1s. 3½d. to 1s. 3¾d. per lb. *Oxalic* is offering rather freely at 4½d. per lb. (*Sal acetos*, 6½d.). *Tartaric* flat, and neglected at 1s. 2d. to 1s. 2½d. per lb., according to brand.

AMMONIA SALTS.—*Carbonate* neglected at 3½d. per lb. *Salammoniac* very strong, and in very good demand at 36l. for first, and 34l. for second quality. *Sulphate* quiet, and easier. Beckett terms, 11l. 15s. to 11l. 17s. 6d.; London, Grey 24-per-cent, 11l. 17s. 6d.; Leith, 11l. 15s.

ANISE.—Higher prices are quoted by cable from Hong Kong for star-anise, viz. 81s. per cwt., c.i.f., steamer shipment.

ANTIMONY.—*Crude Japanese* is not offering at present, and is quoted nominally at 40l. to 41l. per ton. *Regulus* firm at 67l. to 69l.

ARSENIC.—Scarce, and selling at 13s. 3d. to 13s. 6d. per cwt. for best white powders in barrels and kegs.

BENZOL.—Rather steadier at 3s. 1d. to 3s. 2d. for 90-per-cent., and 2s. 2d. to 2s. 3d. for 50-per-cent.

BETEL LEAVES.—A small lot of about 6 lbs. dark and badly-dried betel leaves, imported from Bombay, has been sold at 3s. 6d. per lb. for experimental purposes.

BLEACHING-POWDER has become much scarcer, and is now very firmly held at 7l. 15s. ex warehouse here. On the Tyne the price has advanced to 6l. 17s. 6d. to 7l. 2s. 6d.

BORAX firm at 23s. to 30s. per cwt., according to brand and position.

BROMINE and all bromides unchanged.

CAMPHOR (CRUDE).—We hear of further small transactions on the spot at 110s. per cwt., and for arrival at the rate of 105s. per cwt., "c.i.f." terms. Chinese camphor is nominal at 102s. 6d. to 105s. per cwt. But business has been confined within a very small compass this week. Our imports have only been 70 tubs from Japan.

CAMPHOR (REFINED) firmly held at unaltered rates for English refined; German, 1s. 2¾d. per lb.; but the agents are inclined to ask 1s. 3d. per lb.

CASCARA SAGRADA.—Not very much business this week. The price remains 8d. per lb. on the spot and 75s. per cwt. "c.i.f." terms.

CHAMOMILES.—From Belgium prices are reported to have advanced 10f. this week, and nothing can be procured thence below the parity of 40s. per cwt., London terms, though on the spot some small lots might, perhaps, still be procurable at 38s. 6d. or 39s. per cwt.

CINCHONA.—For Tuesday's bark auctions the quantity catalogued was again very small, amounting only to:—

	Packages		Packages
Ceylon bark ..	642	of which	642 were sold
East Indian bark ..	441	"	441 "
Java bark ..	39	"	39 "
South American bark ..	231	"	227 "
Total ..	1,353	"	1,349 "

From the smallness of these offerings it is evident that many holders are anticipating a much better market for

cinchona in the near future, and are accordingly holding back as much as possible. The slight improvement obtained at the recent Amsterdam sales, and the general firmness of the quinine market, also operated in sellers' favour, and it was generally expected before the commencement of the auctions that there would be a slight advance. These anticipations were more than realised, for an unusually brisk competition prevailed throughout the auctions, especially for medium and high-class barks, which were very well represented indeed. The sales resulted in an advance all round, and the unit may be quoted at from 2d. to occasionally 2½d. per lb. for good and fine lots, and 1½d. for the poorer barks, or an increase of from 20 to 25 per cent. in value. As will be seen from the figures below, one firm of German manufacturers secured nearly one-half of the supply offered, and the equivalent of quinine sulphate represented by this purchase is about 50,000 oz., the total equivalent of the auctions being about 105,000 oz. It is a remarkable circumstance that of all the bark offered only 4 packages common South American red bark were bought in. The 26 small packages of this "red" bark were very strongly competed for, and most of them bought, we believe, for export to France. The quality was very ordinary, but the fine soft dark-red bark, which we used to meet with some years ago, is now no longer met with, and we have to be content with even very poor substitutes.

The improvement both in the average quality of the barks offered and in the range of prices at yesterday's auctions is illustrated by the fact that, whereas at the recent sales the bulk of the cinchona sold realised from 2d. to 4d. per lb., frequently less than that, and rarely over 6d. per lb., an analysis of yesterday's sales gives the following results for the barks sold:—Under 2d. per lb., 3,440 lbs.; from 2d. to 3d., 33,902; from 3d. to 4d., 50,644; from 4d. to 5d., 73,409; from 5d. to 6d., 50,411; from 6d. to 7d., 35,586; from 7d. to 8d., 17,605; 8d. or over, 21,122.

The following are the approximate quantities purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	165,143
" the American, French, and Italian works ..	57,681
" the Frankfurt o/M. and Stuttgart works ..	21,046
" the Auerbach factory	15,800
" the Brunswick factory	8,885
Messrs. Howards & Sons	3,060
Mr. Thos. Whiffen	1,176
Sundry druggists, &c.	10,323
Total quantity sold	286,119
Bought in or withdrawn	330
Total amount of bark catalogued	286,509

It should be well understood that the mere weight of bark purchased affords no guide whatever to the quinine yield represented by it, firms who buy a small quantity of bark by weight frequently taking the richest lots, and *vice versa*. An analysis of the catalogues gives the following prices for sound bark:—

CEYLON BARK.—*Original*: Red varieties, chips, of fair colour, mixed with branch and dust, 2½d. to 3½d.; a few lots, 4d. to 4½d. Good bright to fine spoke shavings, 4d. to 5d.; pale to good bold knife shavings, 3d. to 4d.; a parcel of ordinary siftings, 1½d.; several lots of good, partly bold, root, 3½d. to 4½d. per lb. These red barks formed the bulk of the Ceylon cinchonas offered. Grey spoke shavings, 4d.; small to bold branchy chips, 3d. to 5½d.; yellow bold bright stem shavings, 3½d.; fair chips, 4d.; one fine bold rich lot, 10d. per lb. Hybrid, chips, 4d. to 5d. per lb. *Renewed*: Red chips, dusty and bold mixed, 5d. to 6d.; fine bright spoke shavings, 7d. to 9d.; fair knife shavings, 4½d. per lb. Grey shavings, 6½d.; fine bold branchy chips, 11d. Hybrid, stem shavings, 5d. to 5½d. per lb.

EAST INDIAN BARK.—*Original*. A good proportion consisted of fair red stem and branch chips of good colour, for which 3½d. to 4½d. was paid. Bold branchy and mossy chips sold at 5d. to 6½d. per lb. Good to bright but dusty spoke shavings, 2½d. to 4½d.; root, 3d. to 3½d. per lb. *Grey varieties*: Fine branchy chips (*Condaminea*), 5½d. to 6d.; dull and thin chips, 2½d. to 3d.; good bold branchy, 6d. to 7d. per lb.; smaller and poorer ditto, 3½d. to 4½d.; fine bold rich, 9½d.; dusty to good rich spoke shavings, 6d. to 8½d.; root, 3d. per lb.; fair pale yellow chips, 6d. per lb. *Renewed*:

Good bold red branch chips, 6*d.* to 6½*d.*; rather small to bold stem chips, 4*d.* to 7*d.*; good spoke shavings, 7½*d.* per lb.; grey spoke shavings, 5½*d.* per lb.

JAVA BARK: Bold red quilly chips, partly branchy, 4*d.*; root and siftings, 3½*d.* per lb.; dusty yellow root, partly damaged, 6½*d.* to 7½*d.* per lb.; small to good bright stem chips, 4½*d.* to 5*d.*; mixed siftings and dust, 6*d.* to 6½*d.* per lb.

SOUTH AMERICAN BARK: Of cultivated Bolivian *Calisaya* quill 19,400 lbs. were sold, fair bright silvery of new import at 9*d.*; ordinary weak of 1834-86 import at 5*d.* to 7*d.* per lb. A parcel of low dark and damaged *soft Colombian* bark brought 1*d.* per lb. Of *Red* bark, 26 small packages of new import, together about 2,400 lbs., were offered and sold at fancy prices. The best lots were by no means fine; boldish to medium broken quill, of rather pale orange colour, sold at 4*s.* 10*d.* to 5*s.* 10*d.*; ordinary dull, broken, and damaged at 2*s.* 10*d.* down to 11*d.* per lb.

A cablegram from Colombo announces that the shipments for the season, which closed on September 30 last, have been as follows:—

Season ..	1838-9	1837-8	1836-7	1835-6	1834-5
Lbs. ..	19,798,000	11,914,000	14,392,000	1,536,500	11,837,000

The bark purchased at the last Amsterdam auctions by the principal buyers represents the following equivalents of quinine sulphate:—

	Kilos.	Oz.
The Amsterdam quinine works ..	1,476	= 52,120
„ Brunswick quinine works ..	1,234	= 43,570
Messrs. C. L. Schepp & Zonen, Rotterdam ..	890	= 31,430
The Frankfurt o/M. and Stuttgart works ..	620	= 21,890
„ Auerbach quinine works ..	601	= 21,220
Total ..	4,821	= 170,230

Our imports from all quarters since last Thursday have been 1,052 packages.

COCAINE.—English and German brands are obtainable at 15*s.* 6*d.* per oz.

COCHINEAL.—The demand for this article has recently shown some unwonted signs of animation, and several parcels have changed hands at full rates; 11½*d.* per lb. for good *Teneriffe black*, and up to 1*s.* 1*d.* per lb. for good silvery.

COPPER (SULPHATE).—On the spot prices are again quoted higher, viz. at 22*d.* to 22½*d.* 10*s.*, while for delivery over the first half of 1890 21*d.* is the price.

CREAM OF TARTAR.—Fully 1*s.* per cwt. dearer since last week. First French crystals are rather scarce and not obtainable now under 9*s.* per cwt.

DYEWOODS.—Prices for *Logwood* are hardening, and Jamaica has sold in Liverpool up to 6*l.* 10*s.* per ton, while for arrival more money is required. The supplies of *Fustic* are small, and prices are tightening. Tehuantepec *Lima* wood has sold at 9*l.* 2*s.* 6*d.* per ton.

GALLS.—Business in China galls has been quiet, with business reported forward at the rate of 61*s.* per cwt. “c.i.f.” October-November steamer shipment, but later on cheaper offers have been accepted, viz. 59*s.* for November-December shipment “c.i.f.” terms. On the spot 240 cases China galls have been sold at 69*s.* per cwt., and sifted Japan galls at 68*s.* 6*d.* At the close the price is again 1*s.* dearer, and Shanghai cablegrams yesterday report an improving market.

GAMBIER.—Business remains pretty steady at 30*s.* per cwt. for *Block* on the spot, 28*s.* 7½*d.* for September-November, and 27*s.* 1½*d.* to 27*s.* 3*d.* for November-December. At the drysaltery auctions on Tuesday 446 bales were bought in at 46*s.* per cwt. for fine free, and 44*s.* for blocky cubes.

GLYCERINE.—The market seems strong, but refined glycerines have not up to the present advanced in price. The quotation for double-distilled s.g. 1,260 runs from 63*l.* to 67*l.* per ton.

GUM ANIMI dull of sale. Small to good pale and amber, partly weak sorts, 12*l.* to 14*l.* 17*s.* 6*d.*; medium to fair red sorts, 7*l.* 10*s.* to 9*l.* 10*s.*; bean and pea, 5*l.* 5*s.* to 8*l.* 10*s.*

GUM COPAL.—Very little demand, and *Manilla* lower to sell. Good bold amber, 45*s.* to 46*s.*; common, partly coated, 23*s.*; ordinary soft Singapore, 19*s.* 6*d.* per cwt.

GUM DAMAR easier for *Batavia*, which sold to-day at 71*s.* to 72*s.* for good quality.

GUM KOWRIE.—At to-day's auctions prices advanced all round; fair and ordinary qualities from 2*s.* to 4*s.* per cwt. Of 2,256 cases offered about 1,500 sold, at 11*l.* 15*s.* to 12*l.* 15*s.* for finest transparent scraped, 80*s.* to 110*s.* for fair to fine selected amber, and down to 15*s.* per cwt. for the commonest dust.

GUM OLIBANUM.—Dross very flat. Pickings firm at 15*s.* to 22*s.* per cwt., according to quality. Fair siftings, 14*s.* 6*d.* per cwt.

INDIGO.—The periodical sales will begin on Monday, when a good assortment of East Indian, mostly Kurpah, will be offered. It is thought probable that good qualities will bring somewhat better prices, but ordinary lots may not unlikely go somewhat easier.

IODINE, quiet but steady at 9*d.* per oz. for *Crude*, 13*s.* 3*d.* for *Resublimed*, and 11*s.* 6*d.* for *Potassium iodide*. It is said that the iodide makers have agreed to put up the price all round as soon as the second-hand lots (which are rather heavy) have gone into consumption.

JUNIPER BERRIES.—In Italy the market has come down to a rather low point, 6*s.* 6*d.* per cwt. f.o.b. Leghorn being the quotation, at which a large trade has been done. Since then holders have shown considerably more firmness.

LEAD (ACETATE) has advanced, principally owing to the firm position of alcohol, and of the raw material. The price for best white foreign is now 23*s.* on the spot, or 22*s.* f.o.b. Hamburg, but for October delivery very little seems to be available.

MAGNESIA SALTS are all quiet. *Carbonate* is quoted at 40*s.* to 45*s.*, *Calcined* magnesia at 1*s.* 2*d.* to 1*s.* 4*d.* per lb., and *Sulphate* is firmly held at 80*s.* per ton.

MERCURIALS.—At the close of last week a reduction in the makers' quotations was generally anticipated, but it was ultimately decided to effect no alteration.

MORPHIA very firm, and tending higher; 5*s.* per oz. is said to have been paid, and the makers ask that price for any except important orders, which might still be executed at 4*s.* 9*d.* per oz.

OIL (CASTOR).—Best *Italian* medicinal oil is said to be selling at 5½*d.* per lb.; for best *French* oil, for pharmaceutical purposes, 36*s.* to 38*s.* per cwt. is asked; and 31*s.* 6*d.* per cwt. for first pressings. In *Calcutta* seconds nothing is available now below 4½*d.* to 4¾*d.* per lb. here or in Liverpool. The reports from *Calcutta* still come as firm as ever, with large transactions for England. The stock of seed in *Calcutta* on September 17 was estimated at about 15,000 bags, and seed was coming forward from the growing districts at about the same rate per week.

OIL (COD-LIVER).—Prices have not improved yet, and the oil is now really very cheap. There is, however, a very heavy stock of common and medium qualities in the hands of a large number of holders, although recently some of these have commenced clearing off part of their supplies by selling fair medicinal oil (congealing) for the manufacture of soft soaps. About a fortnight ago 100 tons were so disposed of, packed in petroleum barrels, at the equivalent of about 53*s.* per usual 24-gallon cask. The present very high prices of most of the fish oils favours the use of cod-liver oil for this purpose.

OIL (MIRBANE) firm, 10*d.* to 11*d.* per lb. for double rectified, according to quantity.

OIL (OLIVE).—The market is very firm at 35*l.* 10*s.* to 36*l.* for *Spanish* and *Messina*; and 34*l.* 10*s.* for *Mogadore* oil. The nearest prices for best oils per gallon are 5*s.* 6*d.* for superfine, and 5*s.* for fine. For fine “salad” oil in pipes the following are the current quotations, “f.o.b.” Leghorn, per ton of 1,045 kilos.:—Cream, 65*l.*; sublime, 62*l.*; superfine, 59*l.*; fine, 56*l.*; hair, 53*l.*; and Romagna, 50*l.* These prices are for pipes, hogsheads, and quarter-casks, adding respectively 12*s.* to 18*s.* each to the price. In Italy the demand has become more moderate after the recent violent speculation, but the prospects of the growing crop do not improve by any means as the season advances.

OILS (ESSENTIAL).—*Star-anise* firmly held at 6*s.* 1*d.* per

lb. on the spot. From China cable advices quote 5s. 11d. "c.i.f." terms. *Cassia* has advanced to 3s. 6d. per lb. on the spot, while for arrival no less than 3s. 8½d. per lb. is now quoted, "c.i.f." terms, steamer shipment. *Citronella* is reported rather firmer from Ceylon. On the spot here 1½d. per oz. is asked for tins; bottles about the same price. *Cajuput*, 4s. per bottle. *Mustard* oil, from seed, 21s. to 21s. 3d. per lb. *Nutmeg* oil, best white, is worth from 4d. to 4½d. per oz. American *Peppermint* oil is quoted rather better, at 11s. 6d. per lb. for H.G.H., but we should think that 11s. 4½d. might still buy. Japanese oil of peppermint has been in demand at 3s. 3d. per lb. for fair quality, while there have been several inquiries for forward delivery. *Petitgrain* oil is quoted at 9s. to 10s. per lb. There is a good demand for *Otto of rose*, and it is said that at the beginning of this month four-fifths of this season's crop had already been sold in Bulgaria. *Sandalwood* oil, good to fine East Indian, is worth 14s. 6d. to 18s. per lb. *Wintergreen*, pure from the plant, 8s. 9d. to 9s. per lb.; white artificial oil may be had at 6s. 6d. to 6s. 9d. per lb. *Ylang Ylang*: the best Manila brands are quoted at 14s. to 14s. 6d. per oz.

OILS (VARIOUS).—*Cottonseed* oil steady at 20s. 3d. to 20s. 6d. for crude, and 24s. to 24s. 6d. for refined oil. Hull is somewhat lower, and Liverpool refined is also easier at 24s. 3d. up to 25s. 6d. per cwt. *Cocoonut* oil firm. Cochin, good to fine, in pipes, 27s. to 27s. 6d.; for arrival, 25s. to 26s. *Mauritius* oil, 24s. 9d. spot; Ceylon, 27s. for fine. *Linsced* oil neglected and lower in price; spot and month, 21s. to 21s. 3d. At Liverpool there is a good demand for export at 22s. 9d. to 23s. 6d.; Hull quiet at 20s. 1½d. to 20s. 3d. per cwt. *Palm* oil quiet with sellers at 28s. 6d. for fine Lagos. *Petroleum* easier, American, spot, 5½d. to 5½d.; Russian, 5½d. to 5½d. *Rape* oil firmly held; brown at 29s. 1d.; refined at 30s. 6d. per cwt. Refined Stettin is offering at 34s. 3d. in Liverpool. *Turpentine* quiet at 35s. 3d. to 35s. 6d. for American, 35s. 9d. for November-December, and 35s. 9d. to 36s. for January-April.

OPIUM.—We hear of a very good business this week at full prices, there being reports of a fresh advance from Smyrna. Most of the trade has been done in manufacturing opium, and some orders for soft shipping have also been placed.

ORRIS ROOT.—The holders in Italy have again advanced their pretensions, and now demand 55s. per cwt. for selected *Florentine* root, and 47s. 6d. for seconds; while *Verona* runs from 23s. 6d. to 23s. per cwt. The crop is again a very small one.

POTASH SALTS.—The recent advance in Montreal *Potashes* has quite subsided, and to-day that article is neglected at the nominal quotation of 21s. to 21s. 3d. per cwt. *Pearlshales* 31s. per cwt. *Bichromate* is firmly held at 4d. per lb., at which figure a moderate trade is reported. *Chlorate* has advanced in price, and closes very firm with nothing available below 4½d. *Prussiate* is also very steady at 7d. to 7½d. per lb. for yellow, according to brand. Red prussiate, 1s. 7d. per lb. English refined *Saltpetre* quoted at 21s. to 22s. per cwt., according to packing.

QUICKSILVER.—The anticipation of a change in the official quotations of this article was realised on Monday, when the principal importers reduced their quotation from 9l. 15s. to 9l. Having disposed of about 4,000 bottles at that figure, they then again put up their price to 9l. 5s., the second-hand quoting 9l. 2s. 6d. But subsequently second-hand holders have eased off again, and to-day they made contracts at 9l. 1s. to 9l. per bottle.

QUININE.—There has been an exceptionally lively trade in quinine this week, and prices show an improvement such as has been very unusual lately. The idea that there is some prospect now of a sharp falling-off in the supply of bark during the coming season, and the usual tendency of speculators to invest in likely articles with the commencement of the autumn season are responsible for a large speculative business, the turnover of bulk quinine for the week being estimated at about 400,000 oz., or about 25,000l. worth. The business has been done to some extent on the spot, prices showing a recovery of 1d. to 1½d., viz. from 1s. 1½d. up to 1s. 3d. per oz., but mostly for delivery between November and January at from 1s. 2½d. up to 1s. 3½d.; and February-March up to 1s. 3½d. *Howard's* price for vials, which had long

been nominal at 1s. 6d., was raised firmly to that figure yesterday. *Whiffen's* make in first-hand is held at 1s. 3½ to 1s. 4d.; *Pelletier's* in bottles from the agents at 1s. 7d., and now 1s. 7½d. per oz. is asked. The *B. & S.* agents ask 1s. 4½d. per oz. for future delivery, which is equivalent to not quoting at all. The *Frankfort* agents quote 1s. 4d., and the *Auerbach* people are said to have refused 1s. 3d. per oz. To-day the article is not so booming as yesterday.

RHUBARB.—Our imports of rhubarb since last week have been very heavy, the *Oonfa* bringing 208 and the *Benalder* 46 cases from Shanghai, but the bulk of this is in firm hands.

SACCHARIN.—It appears from an official German report that of the output of the saccharin factory near Magdeburg 78 per cent. are exported direct, while of the remaining 22 per cent. sold to German firms, only about 3 per cent. are really consumed in Germany, the remainder all finding its way abroad. The importation or manufacture of saccharin in Italy has been prohibited.

SAFFRON.—The certainty which now prevails that, but for unforeseen circumstances, the coming crop will be a large one, and of good quality, is bringing down the prices here, and the article has fallen rather considerably.

SENEGA.—Firm at 1s. 11d. to 2s. per lb., and likely to advance shortly.

SENNA.—There have been two small arrivals of *Tiunevelly* leaves (together 268 bales) from Bombay this week.

SHELLAC.—A very large supply was advertised for the weekly auctions on Tuesday, but part of this was withdrawn before the sale. The quantity actually catalogued consisted of:—

	Cases	Cases
Orange lac	1,108 of which 616 were sold	
Garnet "	425 " 245 "	
Button "	194 " 93 "	
	1,727	954

The auctions opened very quietly, and at the beginning holders were content to accept a decline of 1s. per cwt. on *Orange lac*, as compared with the previous auction rates; but gradually more competition set in, and before the close of the sales the fall was recovered. *Garnet* full up, and *Button lac* steady. The following prices were obtained:—First *Orange* BSLS worked, not quite up to the mark, 97s. to 98s.; good pale VSO, 88s. to 90s.; good bright seconds, 77s. to 78s.; common dull and livery to good red, 72s. to 75s. per cwt.; unworked fair to fine pale, 74s. to 79s. per cwt. *Garnet* cakey to good free worked AC, 64s. to 65s. *Button lac*, fine blood bought in at 102s. 6d. to 115s. per cwt.; good to fine firsts sold at 97s. to 98s.; fair seconds, 92s. per cwt. Privately fine OCC garnet is reported to have been sold at 67s. 6d. per cwt. After the auctions the market has remained very firm, the demand for *Button lac* having been especially good, and full prices paid for fine blood lac and fair thirds. *Garnet* also has changed hands at advancing rates, especially fine OCC, which has sold up to 68s. per cwt., with good AC spot at 65s., and December at 67s. 6d. per cwt. At to-day's "call" the following quotations were fixed:—

		Oct.	Nov.	Dec.	Jan.	Feb.
TN Orange, sellers		77/	77/	78/	79/	79/
" buyers		75/	76/3	76 6	77 6	77/3
AC Garnet, sellers		67/	68/	68/	—	—
" buyers		65/	65/	65/	—	—

showing a rather easier market. Reports from Calcutta dated September 17 state that there has been a good demand lately, especially for the better qualities, and there is little prospect now of lower prices during the present season. The manufacturers will not enter into engagements for forward delivery, and the stocks, which are estimated at 20,000 cases in Calcutta, and about 6,000 of fine orange lacs in Mirzapore, are firmly held.

SODA SALTS.—Several important members of this group are dearer and scarcer, and the general tendency is undoubtedly towards higher rates. *Ash* is firmly held at 1d. per degree net on the Tyne, and 1½d. landed in London. *Bicarbonate* firm at 5l. 5s. to 5l. 10s. in London. *Crystals*

are very scarce, in fact for immediate supply there seems very little available. The price has risen fully 3s. since the end of last week, and is now 47s. to 47s. 6d. on the Tyne, according to position, and 56s. *ex* ship in London, while landed crystals command 53s. here, and for immediate delivery up to 62s. 6d. has been paid. *Caustic* in small supply and dearer; white, 60 per cent., 7l. 5s.; 70 per cent., 7l. 10s.; cream, 7l. 5s. *Nitrate* quiet at 8s. 6d. to 9s. or 9s. 1½d., according to quality. The better grades are somewhat scarce. *Saltcake* much dearer.

SPERMACEI, after having fallen to a very low figure, is now dearer again at 1s. per lb. spot, and 11¾d. "c.i.f." for American refined.

SPICES.—*Chillies* dearer, with sales at 36s. for good bright Zanzibar. *Cinnamon chips* have also advanced; broken quills and cuttings, 5½d. to 7¼d. per lb. *Cloves*: Ordinary and medium Zanzibars sold ½d. to ¾d. cheaper on Wednesday; common dark to fair, 5½d. to 6d.; fairly good to fine bright, 6½d. to 7d. per lb. *Cassia buds* run from 44s. to 47s. per cwt. according to quality. *Cassia lignea* remains fairly steady at 22s. per cwt. *Ginger* slightly lower for washed Cochin; rough ordinary hard to bold selected, 15s. to 21s.; bright medium cut, 34s.; fine picked cut, 80s. per cwt. *Nutmegs* quiet, but steady. *Mace* cheaper; medium brownish Penang, 2s. 8d.; fair West India, 2s. 8d. to 2s. 10d. per lb. *Black pepper*, lower for Atcheen; good Ceylon sold at 7½d. per lb. *White pepper* ¾d. per lb. cheaper at the auctions; Siam, brown to fair, 10¾d. to 10¾d. per lb.; ordinary to fair Penang, 7½d. to 8d. per lb. Pimento in demand, and rather dearer; common to good, 3¾d. to 3¾d. per lb.

STROPHANTHUS.—Genuine seeds have been well inquired for lately, principally for export, and the owners now require more money.

SULPHUR.—Steady, with business at 9s. per cwt. for English, and up to 7s. 6d. for foreign *Flowers*; roll quoted at 6s. 3d. to 7s. 6d. per cwt. according to brand.

SUMACH.—Prices have considerably advanced recently, and in Italy the quotations are rather above those prevailing here. Fine Palermo 11s. to 11s. 3d. per cwt.

TEA.—The China market is well supplied with all kinds of tea, except new Kaisows under 8d., which are wanted, but scarce and dear. The former prices of last week for common Shantam, old Kaisow, and good common new Moning are about maintained, with a fair trade doing in all grades up to 1s. per lb. Panyongs are selling cheaply from 8¾d. to 1s. 1d., and fine-quality teas may be picked up at 11d. to 11½d. per lb. S. Capers are firm for all lower grades, common new tea fetching 6½d. per lb. Green teas are in plentiful supply, and now showing fair value for all but lowest grades. Assams maintain fully the recent advance in the face of enormous sales—last Monday's of over 18,000 packages beating record for one day. Demand for everything under 1s. has, however, been very brisk, and dealers have been doing a large trade all over the country. Pekoes 11d. to 1s. 1d. showed capital value, and fine Pekoe Souchongs with most useful liquors are selling at the same range, but nothing can be bought in Pekoes under 8d., and common Souchongs fetch 6¾d. per lb. Finer teas from 1s. up, Pekoes and broken Pekoes, sell irregularly, and some cheap teas have been sold. Ceylons are very firm at present high prices for lower grades, very little leaf tea being obtainable under 11d. per lb., and what there is being pence per lb. dearer relatively than Chinas and Assams. Finer teas are easy, and splendid value may be had in leaf and semi-broken from 1s. 4d. to 1s. 8d. per lb.

TURMERIC remains very firm. At Tuesday's auctions part of the supply of 582 bags was disposed of at 10s. 3d. per cwt. for bold but dull *Madras* finger, and 9s. 6d. per cwt. for small wormy *Cochin* mixed with bulbs.

VALERIAN ROOT.—The new crop is still obtainable at low prices, say, 21s. 6d. to 22s. 6d. per cwt.

VANILLA.—Reports from the Mauritius, dated September 10, state that the crop of vanilla is very late this season, while there are no more beans of the old crop available on the local markets.

THE AMERICAN MARKETS.

(Cablegram from our New York Correspondent.)

NEW YORK, October 10.

QUININE.—The news just received here by cable of the improvement in the London quinine market has been readily echoed here, and our market, which was very inanimate up to yesterday, has received a very favourable impression. Messrs. Powers & Weightman have put another 1½d. on to the quotation for their 1-oz. vials, while for German quinine in tins 1s. 3½d. per oz. is quoted. Everything points to the conclusion that the movement will be of some duration.

CASCARA SAGRADA.—The recent advance in price has greatly tended to check the demand here; at present the position of the article is firm but quiet at 75s. per cwt., c.i.f. London, for good thin bark.

NOTES ON THE ESSENTIAL OIL MARKET.

MESSRS. SCHIMMEL & CO, of Leipzig, in their semi-annual circular just issued, call attention to the great over-production which has lately been created in the output of various classes of essential oils. They point out that as regards the assimilative power of the market, products which are not among the necessities of life should be treated from an entirely different standpoint than the staple articles of daily use. The incessant appearance of novelties in essential oils abroad proves that in many countries, especially outside Europe, the cultivation of essential oil plants has become a positive mania. Growers who apply to the Leipzig firm for advice can often be persuaded with the greatest trouble only of the entirely hopeless nature of their projected undertakings. On the other hand it is very rarely indeed that a real hit is made in the production of a really characteristic novelty.

Among the new products which have been received by the Leipzig firm in the course of the season are a large variety of essential oils from a newly-established factory in Southern Spain, in the province of Granada, which is being conducted with great spirit and energy, and seems destined to become a competitor of the French essential oil industry in such products as neroli, lavender, and geranium oils. Among the new products of this quarter, several oils are enumerated as useful for perfumery or pharmaceutical purposes, but with one or two exceptions they do not seem to bear promise of any very successful future. From the island of Réunion essential oil of *Andropogon fragrans*, known locally as "Pataque Malgache," a thick yellow oil of a flavour undistinguishable from ginger-grass, has been brought on the market, and from the Dutch East Indies a number of oils, designated by their native Malay names, have been received, among which some are thought likely to find an opening in European trade.

ANISE OIL.—The prospects of this oil, which as a commercial article has suffered much from the simultaneous action of a variety of unfavourable circumstances, have now decidedly improved. The sowings of anise in Russia have been much smaller this season than the one before, and the great drought which prevailed in June and July, together with the severe hailstorms of the beginning of August, have caused a considerable amount of damage. The crop is estimated at only one-third of last year's, and very high prices might, therefore, be expected, but for the fact that part of the 1888 crop is still lying unsold in the interior of Russia. The 1888 crop was estimated at 4,000 tons, of which scarcely one-half has been exported or consumed in Russia. The following figures relating to the exports of anise *via* Libau, which may be considered the only export centre of any importance, are given:—In 1886, about 2,196 tons; in 1887, about 1,917 tons; in 1888, about 1,300 tons. The stock of old seed in Russia may safely be estimated at about 2,000 tons.

CASCARILLA OIL.—This oil may be profitably obtained as a by-product in the manufacture of cascarrilla extract, but this favourable opportunity is but seldom available, owing to the very subordinate part of the extract in pharmacy.



Fires Caused by Focussing the Sun's Rays.

SIR,—In reply to a letter in your last issue under above heading. Some years ago my shop-front consisted of small panes of ordinary thin window-glass. There was no boxed-in window cases, but several 2-gallon carboys of coloured waters were arranged on shelves inside. On window-board was a long flat case, usually filled with wrapped proprietary articles. Under a hot sun the carboys frequently focussed the rays and burnt the wrappings of the articles, or scorched the wood-work of the case. Anything inflammable put on the focussed spot speedily ignited. Since I have had a plate-glass front and different arrangement of the windows there has been no further occurrence of the focussing.

Yours, &c.,
R. WOOD.

50 High Street, Windsor.

SIR,—I have twice had materials fired in my shop-window through focussing of the sun's rays by a carboy. Happily, the smoke betrayed the mischief in time to prevent any real damage. I have heard of similar cases on the south coast.

28 Grand Parade, St. Leonards-on-Sea.
Yours very truly,
HARRY A. JENNER.

SIR,—Some three or four years ago the wrapper of a bottle of Elliman's embrocation was set on fire in my shop by the sun's rays focussed through a 6-gallon carboy containing an amber-coloured liquid. This happened, curiously enough, in the month of February. The carboy stood close to the window, and the bottle of embrocation immediately behind the carboy. My attention was drawn to it by a strong smell of burning; smoke was beginning to rise, and when I reached the bottle down the wrapper was smouldering, in a minute or two more it would have been in flames.

Epworth, October 5.
I am, &c.,
C. C. BELL.

SIR,—I have known the focussing of our carboys explode a packet of gunpowder, much to our astonishment.

Medical Hall, Yours,
Polar Street, Liverpool. JOHN JOHNSON.

SIR,—One day in August, 1888, about 9.30 A.M., a sheet of paper in flame attracted attention, which eventually burnt out, and on examining the spot I found that an inch of my prescription book (the cover and leaves) had been completely burnt by the focussing of sun's rays by carboy containing weak sol. pot. bichrom. in the window. The book is to be seen now.

J. R. (142/18.)

SIR,—I was once surprised at finding smoke coming from window-fixture, and discovered that it was caused by the sun's rays being focussed through a 6-gallon show-carboy on to the woodwork. This necessitated application of cold water and the drawing of blinds.

Yours truly,
JAMES NOBLE.

SIR,—You solicit your readers to communicate cases of fire caused by the sun's rays. On July 16, a very showery day, with flashes of sun at short intervals, I placed a parcel containing loafahs on the window enclosure behind an orange-coloured carboy, while I went to attend on a carriage at the door, a period of less than two minutes. On returning I noticed a burning smell, and instantly saw that the sun's rays focussed on the rough edge of the parcel had set it alight. Fortunately I was able to extinguish it before any damage occurred.

Yours truly,
B. HILL. (145/4.)

Mr. Blunt's Process for the Assay of Ipecacuanha Wine.

SIR,—In reference to Mr. Brown's letter and your comments upon it, I have to state that in the passage under discussion mercuric chloride was not only "meant," but written in the paper and printed in the proof, and I am at a loss to account for the singular confusion in all the reports, including that given in the *Pharmaceutical Journal*. I ought, perhaps, to have corrected the mistakes, but the nature of them seemed to me sufficiently obvious to a careful reader. My suggestion comes simply to this: to add to a measured portion of the wine, de-alcoholised by evaporation, an excess of Mayer's solution saturated with mercuric iodide, the emetine will remove its equivalent of the latter (viz. mercuric iodide—I wish to be quite explicit), and will leave in solution potassium iodide free to make and to dissolve more mercuric iodide on the addition of the centinormal solution of mercuric chloride; and the amount of that salt required to give a precipitate will be, as stated in the paper, "not equivalent, but proportional to," the mercuric iodide removed in combination with the emetine.

I cannot consider that when the errors, for which I am in no way responsible, are corrected, the process as given in my paper is wanting in detail; and I also think that, after this explanation, Mr. Brown will see why the actual amount of Mayer's solution added is immaterial so that it is in excess of that required to precipitate the emetine.

The Wyle Cop, Shrewsbury, Yours, &c.,
October 5. THOS. P. BLUNT.

Pharmaceutical Benevolent Fund.

Referring to the Pharmaceutical Council's discussion on "the withdrawal of the voting right of the subscribers to the Benevolent Fund, and the usurpation by the Council or a committee thereof of the selection of the candidates for the pensions or donations," "Pestle" (144/16) says:—"If this proposition is carried, I, for one, will withdraw my mite."

Bunion Treatment.

144/54. W. D. says:—"I had a bunion which was indulged with plasters of no end of kinds and shapes to no good. I then took a bit of lint, about 2½ inches by 1½ inch, cut a hole for a loop to go over the great toe, and dressed it with ung. plumb. carb. et acetat., with a most effectual result."

Pulv. Alkali Co. (Bell).

In reply to 138/30 Bruce (142/74) kindly sends us the following formula:—

Pepsin. sacch. (Wyeth's)	..	..	..	5ij.
Pulv. aromat.	..	..	..	5iij.
Magnes. carb. pond.	..	..	..	5i.
Sodæ bicarb.	..	..	..	5ij.

Mix.

Ft. pulv. Sig.: Half a teaspoonful for a dose, in water, immediately after food.

In reply to 138/30, *Caledonia* (141/53) says:—"Dr. R. Bell, Glasgow, prescribes the above very frequently, and only a few chemists are in the secret. As I had it from himself, the following is correct:—

Pepsinæ	..	..	..	..	5ij.
Pulv. aromat.	..	..	..	..	5iij.
" sodæ bicarb.	..	..	..	..	5i.
Mag. carb. pond.	..	..	..	..	5ss.

M.

Influenza Cure.

Heder recommends cocaine snuff, 1 per cent., 2 drachms of Mindererus spirit, and 2 drops of aconite tincture, every four hours, or, better still, a medical consultation.

SIR,—Your correspondent will find, to cure a cold in the head, that a speedy and safe remedy for adults is 5 minims of the official solution of morphine hydrochloride in a table-spoonful of cold water. It acts like a charm, and is the favourite remedy of a well-known physician of this city, who holds one of the highest positions in one of the largest hospitals in the Midlands.

TIMOTHY FITZ.

C. M. (142/49) recommends the following mixture:—

Liq. am. acet.	..	..	..	..	3ij.
Am. carb.	..	..	..	..	3ss.
Tr. card. co.	..	..	..	..	3ss.
Aq. camph.	..	..	..	..	3ij.
„ chlorof. ad	..	..	..	..	3vj.
3j. ter die.					

As a preventive, a Turkish bath once a fortnight.

Patent-medicine Trade.

SIR,—In response to my letter in last week's issue I am in receipt of communications from some who consider combination for the purpose of preparing and selling (and, if desirable, advertising) a series of proprietaries, &c., in which all would have interest, profit, and confidence in recommending as a reasonable means of obtaining relief from the present unsatisfactory condition of the retail drug trade.

I wish to say that I should like to hear from more before inquiring as to a favourable time and place to appoint a conference as desired.

Faithfully yours,

Henfield, Sussex, September 26.

E. MARSHALL.

One More Scheme.

SIR,—As some interest has been shown in the patent scheme I suggested lately, would you allow me briefly to indicate more fully what I consider a workable plan. If chemists care to take it up it is sure to succeed. Like some who have written me privately, I am not greatly exercised over the patent question, as my own specialities have ousted many of them. Still, many chemists are suffering severely, and the least we can do is to help one another. Something like the following should do.

That three chemists (representative men) be chosen to form a central committee. Said committee to invite chemists to send in recipes for such good going items as a family pill, a neuralgic tincture, a digestive mixture, or an embrocation for rheumatism. The chemist whose recipe is selected as being the best, to be asked to supply the article put up for sale, at a price not exceeding 1s. per dozen over cost of production.

Retailers to be supplied only on pledging themselves to charge marked prices, and to unite by counties to advertise continuously in the local papers.

The leading wholesale drug houses to be asked to hold stock. Profit at first to be 5 per cent., until scheme gets properly floated, when it would be to our interest to raise it indefinitely.

The retail price to bear same proportion to cost as is usual with patent medicines.

Labels, handbills, show-cards, and advertisements to be drawn up by central committee, and to be of a high-class character. The advertising matter to be frequently changed, after manner of Pears' soap.

I am, yours truly,

ORCADIA. (107/36.)

Unqualified Assistants.

F. C. says:—"It was unfortunate that the young girl who poisoned herself should have gone to a chemist for the vermin-killer. Why did she not go to a grocer I know of and get the vermin-killer, then the entry would not have been made in a book, and it might have proved difficult to find out where she got it."

Cocaine in Tooth Extraction.

SIR,—I have been experimenting a good deal this last few weeks with the above. I find the action very variable. I have had some cases where the patients did not know that I had got the tooth out, and others where they appeared to feel quite as much as without the cocaine. I can only persuade them (or try to) that the pain would have been much greater without, and I presume they think it would. I should much like to know if any of my brother-chemists have had any accident with the needle. Does it ever break in the gum? I cannot help thinking, if I press the needle "well home," I may some day leave half of it there—and then what? I might have to fetch a doctor to extract that.

AQUA SODÆ.

N₂O v. Cocaine.

SIR,—In common with many of your numerous readers practising dentistry, I was very much interested in the letters upon the use of cocaine for extracting teeth which appeared in THE CHEMIST AND DRUGGIST a few weeks ago. I followed the directions given by one of your correspondents, and also the very minute instructions you give in one of your last month's issues. Although I tried more than a dozen times with a Lepper's hypodermic syringe, I never once had what could be considered satisfactory results—certainly none could be called "painless extraction." Now as regards nitrous oxide gas, every administration of it has been a marked success—quite painless to the patient, and leaving no bad after-effects.

I was also very pleased to read your interesting report of the Dental Congress at Brighton, at which there seemed to prevail an almost unanimous opinion in favour of its use, and especially that it was quite safe. I am, however, startled to read in your issue of to-day that Lady Milne died in Edinburgh this week from the effects of nitrous oxide gas administered to her by a dentist. I feel certain that if you could give us some particulars of this deplorable accident, or the comments of the dental journals, it would be of grave interest to many of your readers who successfully practise dentistry in conjunction with pharmacy.

Yours,

W. P. (142/21.)

Pure Cocaine.

Referring to a note, headed "The Resorcin Test," which appeared in No. 492, page 445, of THE CHEMIST AND DRUGGIST, concluding with the remark, with reference to Merck's cocaine, that "it has yet to be shown that these slight traces of nitric acid improve its physiological action as an anæsthetic," Mr. Merck (Darmstadt), sends us the following remarks: "Nitric acid cannot have any influence whatever on the action of cocaine, otherwise nitrate of cocaine would show a stronger or weaker anæsthetic action than the hydrochlorate, which is, however, not the case. The slight trace of nitric acid found by Goldner in a sample of Merck's hydrochlorate of cocaine was due to a minute portion of cocaine nitrate casually present, which had escaped notice when the preparation was tested in my laboratories, as both indigo and ferrous sulphate of iron did not indicate the presence of same. The reason why Merck's cocaine enjoys universal favour is the fact that it is absolutely free from any of the noxious secondary amorphous bases contained in coca leaves. In most other makes of cocaine in the market these amorphous alkaloids are present in a more or less degree. They therefore fail to stand MacLagan's test, while Merck's cocaine hydrochlorate fully answers same."

The Sale of Methylated Spirit.

By section 26 of the Revenue Act, 52 & 53 Vict. c. 42, which received royal sanction on August 26, 1889, it is enacted that "the sale of methylated spirits between the hours of ten of the clock in the evening of Saturday and eight of the clock on the following Monday morning is hereby prohibited, and any person selling methylated spirits in contravention of this section shall for each offence, in addition to any other fine or penalty to which he may be liable, incur a fine of 100l."

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Blaud's Pills.

SIR,—In THE CHEMIST AND DRUGGIST of June 22, 1889, I read a question from H. Lambie regarding how to make Blaud's pills. Allow me to inform him that I have made some millions of them, and the best method is to use ferri sulph. exsicc. and dried potass. carbonas. Mix the two salts with a little magnesia usta, and make it into a mass with glycerine. No action will take place by making the pills in this way, and we obtain that great advantage that the chemical action takes place in the stomach, and the carbonate of iron goes far easier into the system. I consider that it is quite wrong to let the chemical action take place in the mortar, and then make the mass into pills. A good formula is—

Ferri sulphat. ..	..	..	10 or 15 grammes
Potas. carbonat. ..	..	..	"
Magnesia calcinat. ..	..	q.s.	"
Glycerini ..	..	q.s.	"

Ft. pillulæ.

Yours truly,

Barcaldine, Queensland. OSCAR BANCKE,
Danish Apothecary.

The Bismuth Mixture.

SIR,—The prescription of "H. F." came under my notice three months ago. The decomposition I took to be oxyiodide of bismuth. It was shown to the prescriber and bismuth carbonate substituted for it, but to my surprise a similar result was obtained. The sample on examination was found to contain a nitrate: it effervesced with acids and bicarbonates. Pure carbonate of bismuth gave satisfactory results. Have any of your readers had similar experience?

I am, sir, yours truly,

CASCARA. (144/10.)

Corrective Pills.

Ferri sulph. ...	..	..	gr. xxx.
Pulv. capsici ..	..	..	gr. vi.
Pil. aloes et myrrh. ..	..	..	3j.
Ol. pulegii ..	..	..	gtt. xij.

M. Ft. pil xij.

Cap. ij. om. nocte.

W. B. P.

Can the above be satisfactorily dispensed without alteration or addition?

BAFFLED.

[We should say—No.]

Spirit. Chlorof. Co.

SIR,—I quite agree with your remarks concerning "sp. ætheris" in your last week's issue, but differ from you as regards the "sp. chlorof. co." I do not think any medical man would add "co." if he meant the B.P. spirit, which you would hardly call a compound spirit, and is a much older preparation than the B.P. tincture. If I mistake not the latter was added to the B.P. because the spirit was such a weak preparation, the tinct. card. co. simply added as a colouring matter, and in my opinion the tinct. chlorof. co. should be dispensed when *sp. chlorof. comp.* is prescribed. I should like to have some one else's opinion besides that of

A COUNTRY CHEMIST. (145/53.)

SIR,—Your answer to "W. I. T." will surprise many chemists practically engaged in dispensing, and I believe very few will agree with it. I have dispensed spt. chloroform. co. many times, and hope to do so again. Tinct. chloroform. comp. is its sign with me, and will continue to be so. I may also mention that I always dispense tinct. lavand. co. when spt. lavand. co. is ordered, and not spt. lavand. B.P. I should expect the dispenser who used spt. chloroform for

the chloroform compound to also use the colourless spt. lavand. when the lavender compound was ordered. Had "S. D. F." indulged in "Sweet Lavender" for his illustration, instead of the stinking ethereal compound, his logic would have been perfect, and your caustic repartee "non est." My belief is that the spt. is a *lapsus plumeæ* of the prescriber, and that the main factor present in his mind when writing is a coloured chloroform compound.

London.

JNO. HICK. (107/38.)

[We have met with cases in which "spt. chlorof. co." was written and the plain spirit meant, but none in which the compound tincture was meant. Tr. lavand. co. used to be called spt. lavand. co. It would be well to have the matter settled now by a fair expression of opinion *pro* and *con.*]

MISCELLANEOUS INQUIRIES.

136/6. *Dum Spiro Spero.* (1) *Chartreuse.*—Dorvault gives the following formula:—

Oil of melisse ..	..	..	2 grammes
„ hyssop ..	..	..	2 „
„ angelica ..	..	..	10 „
„ peppermint ..	..	..	20 „
„ mace ..	..	..	2 „
„ cloves ..	..	..	2 „
Sugar ..	..	..	q.s.
Rectified spirit ..	..	..	2 litres

Colour yellow with tincture of saffron, or green with subsequent addition of a few drops of indigo solution.

(2) The pills do not present any great difficulty. Rub the quinine, camphor, and extract of Indian hemp, together with 4 grains of tragacanth and 5 drops of glycerine; then mass with water.

1/10. *Tartar.*—Palm oil is sometimes given for **Marsh-mallow Ointment**, but the genuine ointment (according to the formula given on page 712, May 18) is, we believe, most frequently given.

134/55. *D. W. N.*—We have not published the recipe for the lung tonic, and have no knowledge of its composition.

131/52. *Leander.*—(1) Try the gelatine preparation of which the formula was given on Sept. 28 for your extract of malt bottles. (2) You can make an **Imitation of Cod-liver Oil** for your window by tinting water with bichromate of potash. (3) Santonin does produce strange symptoms in some people, and we see no reason for disbelieving Mr. Spiller's statements.

138/60. *Puzzled.*—"1 pany of chusenell." We should think cochineal was wanted.

139/14. *L. B.*—We do not know of any American State in which the British chemist and druggist qualification is accepted in lieu of the American. Moreover, there is no such thing as an "American" qualification; the qualifications are those of the States.

141/18. *Alpha.*—Walnut juice is frequently used to dye the hair black. It is expressed from the green shells of walnuts before they are ripe; or these are crushed and macerated in twice their weight of claret; or they are bruised and infused in lard and strained to get a pomade.

139/55. *Gvalia.*—**Exalgessin** is a French rival to antipyrin. Its proper name is ortho methyl-acetanilide. See "Congress Topics," August 10, page 207.

138/33. *Sandifer.*—(1) **Ol. Succini Rect.** is simply common oil of amber redistilled in presence of water. (2) The preparation seems to be "Liquor Cantharidis (Ferris's)."

138/68. *A. J. F.*—The chemistry of the hydrocarbons and of combustion is admirably introduced in Faraday's "Lectures on a Candle."

133/42. *Sugar-coated.*—We understand that Messrs. A. Gibson & Son, of Manchester, undertake the sugar-coating of chemists' own pills.

137/71. *T. M.*—We gave a list of books a fortnight ago in which you will find what you want.

100/36. *E. P.*—**Menthol Cones** are made by melting the menthol and pouring it while in that condition into suitable moulds.

133/7. *Analysis.*—You can obtain copies of "Practical Pharmaceutical Chemistry" from the author, Mr. George Robertson, London Hospital, Mile End, E.

138/9. *Medicinal Herb.*—Please refer to our buyer's guide, which will direct you to the firms with whom you should communicate.

141/4. *Subscriber (Jersey).*—Cassia flowers and a very little bergamot added to orris powder will develop the violet odour for sachets.

130/23. *A. H.*—For an ammonia bath use 2, 3, or 4 lbs. of sal ammoniac to a bath. Sulphur bath: Mix $\frac{1}{2}$ lb. to 1 lb. with a pailful of water and add it to the bath. Camphor bath: Put $\frac{1}{2}$ oz. camphor on a plate, and heat it by hot water in the bath-room. Eucalyptus bath: Use 2 or 3 drachms of the oil in a similar manner.

137/37. *Mineral Water.*—"Artificial Aërated Waters," by Joseph Gould, published by Barrett, Sons & Co., 21 Seething Lane, may be of some use to you. But you would get better preliminary information if you were to obtain the catalogues published by the firms who advertise aërated-water machinery in this journal.

133/30. *Stylograph.*—The **Cement for Stereotyping Composition** appears to consist of glue, water, and prepared chalk, with about 2 per cent. of crude carbolic acid.

131/70. *J. J.*—The sample appears to consist of cocoa freed from the fat. You are wrong in supposing that it should be completely soluble in hot water. Soluble cocoas are subjected to special treatment before they can be produced in that condition. The leading manufacturers are careful to keep their methods secret.

130/23. *Elecamcaps.*—We have had the powder submitted to us several times. It consists of aromatics (ginger the principal) with some bitter. Obviously it cannot be ascertained with certainty what the components are.

130/52. *W. J. P.*—**Frothine for Beer.**—Your sample is an infusion of quillaia, to which 10 per cent. of gum arabic and 20 per cent. of glycerine have been added.

128/17. *J. W. S.*—The difference between your two samples of hair restorer is that No. 1 contains no acetate of lead—only milk of sulphur; while No. 2 contains the lead salt and precipitated sulphur.

124/35. *Digby Grande.*—We cannot say with certainty what the **Breast Salve** is composed of; probably soap cerate plaster, 3 parts; gum thus, 1 part; and linseed oil, 1 part.

128/8. *Deva.*—Compound for **Husk, or Cough, in Calves.**—We think that this consists simply of coarsely powdered stramonium made into a mass with soft paraffin. There may be other ingredients in it.

130/34. *Graham.*—Griffith's "Elementary Text Book of Photography" (Gurney & Jackson, 7s. 6d.) will suit you.

132/13. *Oleum.*—One of the best oils for hair oil is oleum arachis, or **Peanut Oil**, which does not become sticky. We expect that what you got for nut oil was that pressed from walnuts, which is a drying oil. Peanut oil should not be difficult to obtain. It is extensively used in France for domestic purposes in place of olive oil.

130/33. *J. W. G.*—**White Shellac** is made by dissolving ordinary shellac in a strong solution of pearlash, then passing a stream of chlorine gas through the solution, which bleaches and precipitates the resin. The latter is well washed with hot water, and stretched while in the semi-solid state.

132/28. *Student.*—Before entering upon the study of anatomy you should make yourself acquainted with Huxley's "Animal Physiology" (Macmillan, 4s. 6d.).

135/35. A Sheffield correspondent sends us a **Strange Recipe**, said to have been made up by a Hull chemist. If that is so we admire the capabilities of the Hull gentleman. The recipe is a scrawl which reads somewhat as follows:—

C onymugirugmugmag my a jyunymajungmurum
C onymyngivyrung ung am, Py any mroy unerung onung no

499

Who can solve the cypher?

139/22. *Santonin.*—(1) We cannot accede to such requests. (2) The following notes on varnish stains, which we have received from a correspondent, may suit your purpose:—

Rose-wood Stain and Varnish.

Brown hard spt. varnish..	..	..	20 lbs.
Red-wood stain ..	..	..	5 "
Nigrosine ..	..	..	12 drachms

Satin Wood.

Brown hard spirit varnish ..	..	..	8 lbs.
Provence rose (Brookes, Speller & Simpson)	..	..	$\frac{1}{2}$ oz.

Mahogany.

Brown hard spirit varnish ..	..	..	2 lbs.
Red-wood stain ..	..	..	6 oz.
Dragon's blood ..	..	..	6 "

Walnut.

Brown hard ..	..	..	..	1 lb.
Scarlet (B. S. S)	..	..	..	3 drachms
Nigrosine "	..	..	..	2 "
Provence rose "	..	..	..	1 "
Green "	..	..	..	2 "

R. B. (65/15.)

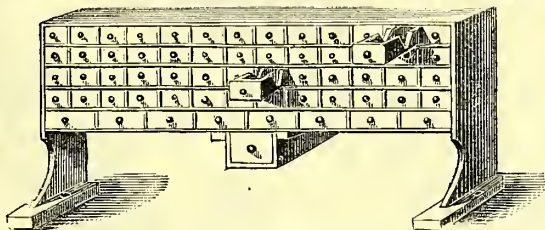
140/7. *Cesar.*—**Skin Pearls** (for acne, pimples, &c.).—Calcium sulphide, $\frac{1}{12}$ grain in each, suitably coated.

139/6. *Pill Box.*—The prescription is one advertised by a Mr. Russell for the cure of obesity. He holds the secret of Gavelle's extract, and it is not intended that druggists should compound the prescription.

138/73. *C. R. Owen.*—**Quinine Sherry** may be made of the same quinine strength as the official quinine wine. Note, however, that sherry contains tannin, which will precipitate part of the quinine. The same remark applies to port. Wines may be detannated by steeping a drachm or so of gelatine in each bottle for a week, shaking occasionally.

THE NEW DRUGGIST'S LABEL CABINET

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Full Particulars on Application.

[2]

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New and Improved Hypnotic, Patented and Registered.
Is free from all unpleasant by or after effects usually
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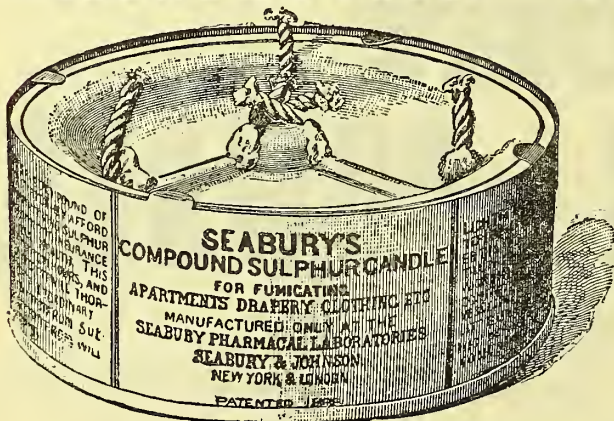
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NOTHING EVER DEvised EQUALS
**SEABURY'S
SULPHUR CANDLES**

(PATENTED 6407).

Will destroy disease germs after infectious diseases, in vacated apartments or hospital wards, also bedding, clothing, and drapery.

Will destroy noxious vapours from sewers, cesspools, &c.

Will destroy insect pests, and other vermin.

These candles afford the only safe means of burning sulphur indoors, on board ship, &c., and are used and approved by Boards of Health in various parts of Great Britain and America.

One candle will burn for two hours, and thoroughly disinfect a room of ordinary size. **ONE SHILLING EACH.**

For Mild Disinfection or Deodorisation use

SEABURY'S "HYDRONAPHTHOL" PASTILLES.

(TRADE MARK.)

These Pastilles are a combination of "Hydronaphthol" with fragrant gums and perfectly harmless materials to promote combustion. Each Pastille will burn for about thirty minutes, and will not only deodorise the room in which it is burned, but will drive out flies and other insect pests. The Hydronaphthol is volatilised by the heat and recrystallises in air, being deposited on walls and draperies, whence it is subsequently taken up by the humidity of the atmosphere, thus furnishing lasting sources of disinfection. Twelve pastilles in a decorated tin box. **ONE SHILLING PER BOX**

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PURE AND CHEAP:

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Mono Carbonate of Soda	---	...	---	---	---	1.90
Sulphate of Soda	...	...	...	---	...	trace
Chloride of Sodium	...	...	...	...	...	.035
Moisture	...	...	...	---	---	.82
Insoluble	...	...	---	---	---	nil

PURE ALKALI,

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EQUAL TO 98 PER CENT. OF CARBONATE OF SODA.

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THE NEW HYPNOTIC.

SPECIAL PREPARATIONS.

"Drs. Hagen and Häfter, assistants in Professor Strümpell's clinic at Erlangen, consider chloralamide one of the most reliable narcotics, and recommend that it should be given in a slightly acidulated solution or in wine. They say that the most appropriate cases for its administration are Neurasthenia, Spinal Affections, and Heart Disease, and recommend a dose of 50 grains.* The drug, when it acts at all, produces the desired sleep in half-an-hour. Its administration in phthisis has not proved so satisfactory. . . . They also gave it one morning to three convalescents from syphilis, who had taken a dose the night before with good effect. The result in all three cases was that the patients slept nearly the whole day, without being deprived of their ordinary sleep the next night."—THE LANCET, August 24, 1889.

* The Adult Dose is now reckoned as 60 grains.

VIN. CHLORALAMID (WYLEYS').

Adult Dose : 2 Fluid Ounces (equal to 60 Grains of Chloralamid).

Price 3s. 6d. per lb.

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Each Pellet weighs 10 Grains. Price 2s. 6d. per oz.

WYLEYS & CO., MANUFACTURING CHEMISTS, COVENTRY.

**Coca
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SOLE PROPRIETORS—

**THE FRENCH HYGIENIC SOCIETY OF LONDON, 6 CONDUIT STREET, LONDON, W.
REGENT STREET,**

whence will be forwarded to any applicant a Pamphlet containing the testimony of eminent British and Foreign Medical Authorities to the invaluable properties of the Coca Preparations.

"THE CHEMIST AND DRUGGIST" (of March 30, page 429) says—"The French Hygienic Society of London have for some time made a speciality of preparations of the coca leaf, such as coca-tobacco, which were calculated to be used as articles of daily consumption; and they now add to their list several which are designed to maintain the popular use of the Peruvian invigorator. Coca tea—an excellent blend of the coca leaf and a choice Ceylon tea—is likely to be a favourite, for it makes a pleasant beverage of good aroma which is powerfully restorative. Their coca elixir is a good idea. It is intended for use along with any table wine, 15 to 20 drops of it making with a glass of sherry a good coca wine, possessing the full flavour of the leaf. This flavour is a marked characteristic of all the preparations, especially the tablets and lozenges, and is an indication that care has been exercised in their manufacture. The tablets and lozenges may be used for throat troubles; and those without borax are a portable form of the restorative for use by athletes and pedestrians. All these specialities are put up in attractive style."

RETAIL PRICES.

Coca Tablets and Lozenges in boxes, **1/-, 2/6, & 4/-** per Box.

Coca Elixir **3/-** " Bottle.

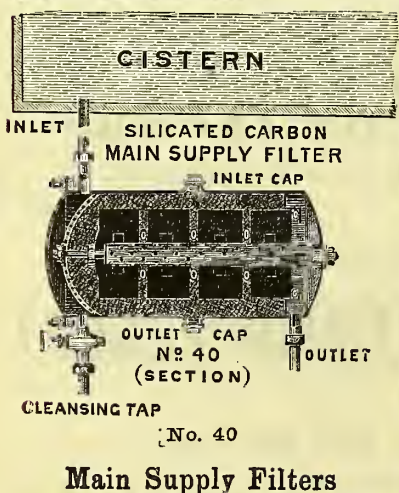
Coca Tea in tins of 1 lb. **4/-**, ½ lb. **2/-**, ¼ lb. **1/-**.

USUAL WHOLESALE DISCOUNT. CAN BE OBTAINED FROM ALL WHOLESALE HOUSES.

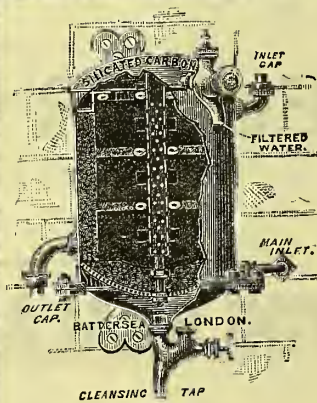
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SILICATED CARBON FILTER CO., BATTERSEA, LONDON, S.W.

TO THE CHEMISTS, DRUGGISTS, AND PATENT MEDICINE
VENDORS THROUGHOUT THE WORLD.

WAKE UP! WAKE UP!! WAKE UP!!!

We wish you to understand that the great "boom" in the Patent Medicine Market during the ensuing season will be

KOPTICA! KOPTICA! KOPTICA!



REGISTERED TRADE MARK.

THE FAMOUS

PERSIAN HERBAL REMEDY

FOR

Rheumatism, Gout, Lumbago, Sciatica,

RHEUMATIC GOUT,



REGISTERED TRADE MARK.

Neuralgia, Face Ache, Tic-Douloureux, Cramp
AND
ALL KINDRED DISEASES.

MOST of you are aware that **Koptica** was first put on the market about ten years ago, and at once found favour with the public because of its unrivalled efficacy as a curative in all Rheumatic affections. Testimonials poured in from all quarters of the globe, and although **Koptica** has hitherto been by no means extensively advertised, a steady demand has been maintained, mainly through the recommendations of those who have personally tested the

MARVELLOUS EFFICACY OF "KOPTICA."

We are now so thoroughly satisfied as to the intrinsic merits of **Koptica**, that we intend to "boom" **Koptica** as **Koptica** has never been "boomed" before.

COMMENCING EARLY IN OCTOBER,

We shall advertise to such an extent that, in due course, **Koptica** shall be known far and wide. The leading journals will have "bold advertisement" of **Koptica**, and no sufferer from Rheumatic affections shall remain in ignorance as to what **Koptica** is, and where **Koptica** can be obtained. We want every Chemist and Patent Medicine Vendor to keep **Koptica** in stock, because we mean every Chemist to be asked for **Koptica**. We know that you are being asked for **Koptica** now, and that a good many of you can't supply **Koptica** because you don't stock **Koptica**, and then your would-be customer writes to us direct, and says:—"Please send me a bottle of **Koptica**, for which I enclose stamps, with 2d. extra for postage. I tried to get it at my Chemist's, but he said he didn't keep it, and thought you must be dead, as he hadn't seen it advertised lately." Now we want you to understand that we are not dead—we are

ALIVE!

ALIVE!!

ALIVE!!!

AND WE MEAN TO

ADVERTISE, ADVERTISE, ADVERTISE

KOPTICA,

until **Koptica** is, as **Koptica** deserves to be, the best-known remedy in the market for all Rheumatic affections.

WE SHALL SPEND MONEY FREELY

in advertising **Koptica** during the ensuing season, and so we want you to lay in a little stock, so as to be prepared to supply your customers when you are asked for **Koptica**. We do not, of course, expect you to invest largely in **Koptica** until we have created a demand for **Koptica**; but we shall be glad if you will order just a little—say only three bottles of **Koptica**, which you can obtain from your wholesale house at a cost of about 2s., and then you will be able to supply **Koptica** the very first time you are asked for **Koptica**; thus you will not lose your custom, as some of you do now, by not stocking **Koptica**. Bear in mind that by failing to supply **Koptica** when you are asked for **Koptica**, you lose not only your profit on **Koptica** but also on the other articles that your disappointed customer might purchase—then you cry out that "trade is bad," when, as a matter of fact, trade is better than it has been for years. So

DON'T DISAPPOINT YOUR CUSTOMERS.

Send for, say, three bottles of **Koptica** from your wholesale house, Newbery, Barclay, Sangers, Hovenden, Whiteley, Barker, Sutton, Lynch, Evans & Lescher, Butler & Crispe, Thompson, May Roberts, &c., &c., all stock **Koptica**, and can supply you with any quantity on the best terms; they can also supply you with handsome show cards and books of testimonials, and we will advertise for you locally, as well as generally. **Koptica** is neatly made up in bottles, which are enclosed in a handsome lithographed outer cartridge, making an attractive addition to the window or counter. The bottles retail at 1s. 1½d., 2s. 9d., and 4s. 6d., and contain respectively 12, 36, and 60 doses, so that **Koptica** has everything in its favour, and is bound to sell; but be sure you lay in a small stock of **Koptica** early in October, so as to be in a position

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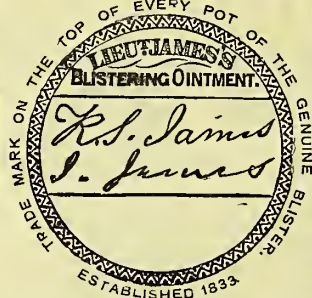
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Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

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1 part to 5 Sp. Vinyl Rect. 56 o.p. makes Sp. Æth. Nit. 850.

This concentrated preparation is carefully drawn in our own laboratory, is highly recommended, and is daily finding increased favour with the trade for making Sp. Nitre, as required for use, and thus avoiding the risk of a development of free acid, which is more or less prevalent in Sp. Nitre that has been drawn some time. Price in Winchester Quarts, 3s. per lb., net.

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Introduced by Curtis & Co.

See that this preparation bears our name.

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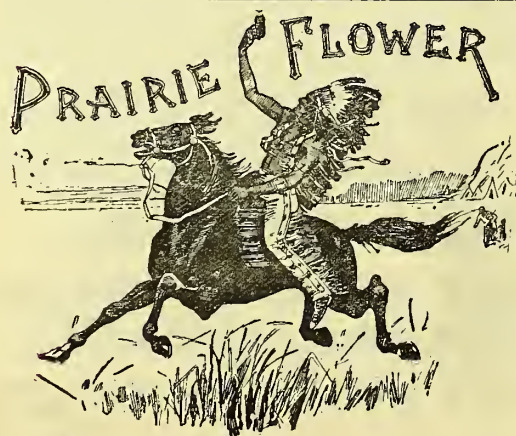
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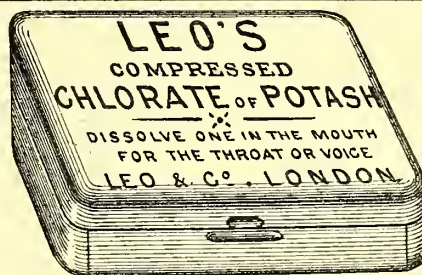
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quality only; also Chemically Pure;

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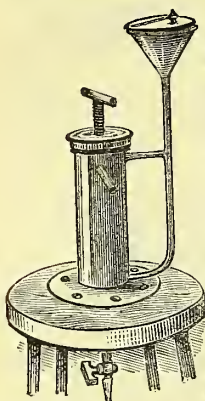
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SOLE AGENTS FOR THE UNITED KINGDOM—

OSCAR ANDREAE & CO.
26 GREAT TOWER ST., LONDON, E.C.

PROVISIONAL PATENT.

**TEBBUTT'S COMBINED PERCOLATOR & PRESS,**

For the Preparation of Tinctures, Fluid Extracts, & Concentrated Infusions,

Supplies a long-felt want, the methods hitherto employed being wasteful and unsatisfactory. The results of its use are an exhausted Marc and a superior Preparation, with absolutely no loss of Spirit.

TESTIMONIAL.

MR. TEBBUTT.
Dear Sir,—We have much pleasure in telling you that your patent Perculator has given us very great satisfaction. We find that the marc, whether it be that of a Tincture, Fluid Extract, or Concentrated Infusion, is thoroughly exhausted after percolation is complete, also that there is a great saving of spirit.

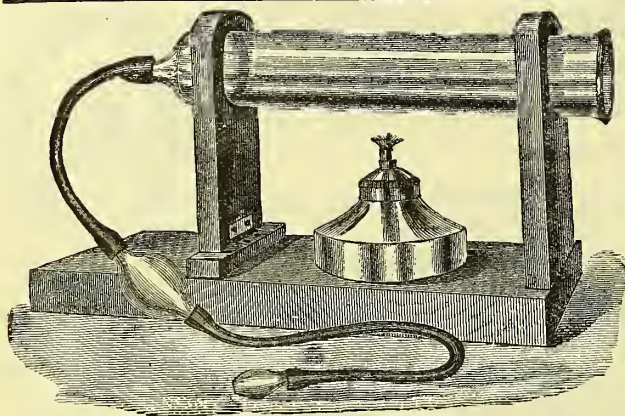
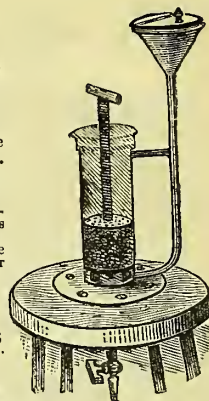
We may add that at the last meeting of the British Medical Society, held lately in Leeds (August, 1889), we exhibited our Fluid Extracts made with your Perculator, and they attracted a great deal of attention by their excellence.—*vide* "British Medical Journal," Sept. ; and "Provincial Medical Journal," Sept. 2

Yours truly, CHAS. GREEN & CO.

PRICES WITH STAND COMPLETE :—

To make $\frac{1}{2}$ gall. of Tincture, such as Gentian, 15. 6. To make 1 gall. of Tincture such as Gentian, 22. 6

Orders should be accompanied with a remittance, addressed to

FRANK TEBBUTT, 22 Langdon Rd., Upper Holloway, LONDON, N.**MAXWELL'S
CHLORIDE OF AMMONIUM
INHALER.**

The simplest Apparatus yet introduced to the profession.
Requires no strong caustic or acid liquids.
Fumes are invariably neutral.

To be had of all Chemists and Sundriesmen, and of the Proprietors—

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LYNCH & CO., London Agents.

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BUYERS ARE CAUTIONED TO SEE THAT THEY GET THE**GENUINE****DR. JOHN HOOPER'S PILLS,**

Which may be known by the Name of the Inventor, engraved in white letters, being on the Government Stamp.

Handbills and Show Cards will be sent on application to

MAY, ROBERTS & CO., 9 CLERKENWELL ROAD, LONDON, E.C.**AMERICAN BUYERS are particularly Cautioned !!**

Telegraphic Address—"FEEDING BOTTLES LONDON."

"FOR THE BLOOD IS THE LIFE."

**CLARKE'S
WORLD FAMED
BLOOD MIXTURE,****THE GREAT BLOOD PURIFIER AND RESTORER.**

(Trade Mark—"BLOOD MIXTURE." Registered No. 3275.)

The Celebrated CURE FOR Scrofula, Scurvy, Eczema, Blood and Skin Diseases, and Sores of all kinds.

Wholesale of all the Wholesale Houses. Usual terms.

Sole Proprietors, **THE LINCOLN & MIDLAND COUNTIES' DRUG COMPANY, LINCOLN.**Counter Bills and Posters, with Name and Address, also Show Cards, on application. Printed matter supplied in any Language for Foreign Agents.
CAUTION.—The Proprietors will take immediate proceedings against all persons infringing their Trade Mark, "Blood Mixture," Labels, Wrappers, &c., or Advertisements, or in any way infringing their rights.

TRADE PRICES.
PRICE LISTS UPON APPLICATION.
SEND FOR OUR LISTS.

PRICE LISTS UPON APPLICATION.

GLASS BOTTLES

FOR

DISPENSING.

PATENT MEDICINE PROPRIETORS.

PERFUMERY FACTORS. AERATED WATER MAKERS.

SYRUP, CORDIAL, AND LIQUEUR BOTTLERS.

HONEY, JAM, AND PRESERVE BOTTLERS.

SOLE MAKERS.

THE "INTERNATIONAL" FEEDING BOTTLES

Constantly Increasing Sales. Cheapest and Best Series to Adopt.

SEND FOR SPECIAL TRADE LIST.

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WITH OR WITHOUT LETTERING, LABELS, ETC.

SHOW CARBOYS, JARS AND POTS.

GROUND-GLASS STOPPERED BOTTLES.

EVERY CLASS AND DESCRIPTION.

OPAL POTS, JARS, AND BOTTLES.

GREAT VARIETY. NEW PATTERNS.

PRICE LISTS UPON APPLICATION.

BREFFITS'

(LIMITED)

AIRE AND CALDER BOTTLE CO.

83 UPPER THAMES ST., LONDON.

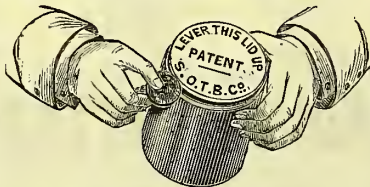
PONTIFEX & WOOD, LIM.SHOE LANE,
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"FARRINGTON"
NEW PATENT
PUMPS.

Made in various materials, suitable for Hot and Cold Liquor, Wines, Spirits, Oil, Vinegar, and Acids generally.

THE SELF-OPENING TIN BOX CO.

(Griffin's Patents.)

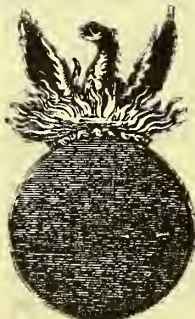
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The largest
Tin Box
Works in the
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Ten Prize
Medals
have been
awarded.Tins of
all kinds for
Oils, Paints,
Drugs,
Tea, Coffee,
Milk, Syrup,
Preserves,
Vaseline, &c.

Persons requiring Self-opening Tin Boxes are invited to apply at the Works for our revised Net Price List.

Special Quotations for Quantities, &c.

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COLOUR OF PAINT.

BRISTOL—Manufactories: Phoenix Wharf and Temple Gate. Offices: Temple Gate. Telegrams: "Phoenix Bristol."

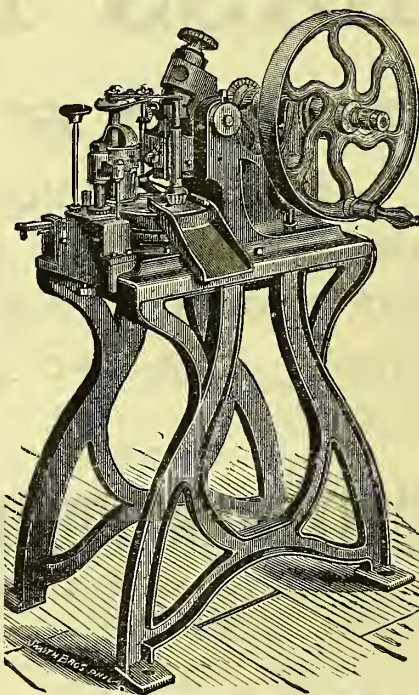
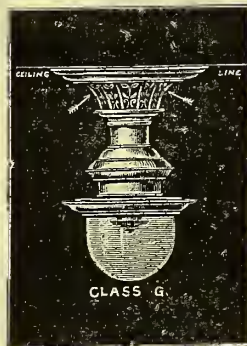
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HARD LUSTROUS ENAMEL,
IN ALL THE ART SHADES.

For all kinds of decoration on Wood or Iron. Dry with a surface like Porcelain. Sold in small or large Tins, or in bulk. Prices and shades on application.

WHITE LEAD, ZINC WHITE,
PAINTS & COLOURS OF ALL
KINDS.**MIXED PAINTS READY FOR USE,**
In Tins, 1, 2, 4, 7, and 14 lbs. each.**HIGH-CLASS VARNISHES**Of all kinds, for Coachbuilders, Decorators, &c.
OIL BOILERS, REFINERS, & MERCHANTS.
Export Orders receive special and prompt attention.**McFERRAN'S**
COMPRESSED
TABLET MACHINES,

Of various Sizes and Prices.

No. 4—For Retail Druggists and Limited Manufacturing Purposes—
FOR FURTHER PARTICULARS ADDRESS—**J. A. McFERRAN, 1720 Green St., Philadelphia, U.S.A.**
Or **F. FOSTER, SCARBOROUGH, ENGLAND.****CHEMISTS' SHOPS,** to be attractive and healthy, should be well lighted and ventilated.The Wenham Gas Lamp has now been perfected for **INSIDE and OUTSIDE Shop Lighting**, ensuring a pure, brilliant, economic light.

Write for a descriptive Catalogue to

THE WENHAM COMPANY (LIMITED)

Upper Ogle Street, Fitzroy Square, London, W.

SILVER MEDAL
I.H.E. 1884.
THE ONLY
MEDAL AWARDED
FOR THIS
SPECIALITY**CHLORIDE OF LIME!**IN AIRTIGHT WATERPROOF & ODOURLESS PACKAGES
INVENTORS AND NATIONAL CHEMICAL CO., LONDON
MANUFACTURERS

THE N. C. Cos. PACKAGES HAVE STOOD THE TEST FOR MANY YEARS, AND CAN ALWAYS BE RELIED UPON TO GIVE SATISFACTION.

KEPT IN STOCK BY ALL WHOLESALE DRUGGISTS &c.
SEE THEIR PRICE LISTS.SILVER MEDAL
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BEWARE
OF OTHER SO-
CALLED AIRTIGHT
PACKAGES.**GOVERNMENT DISINFECTANT**

CARBOLIC POWDER (PINK) in 1 Cwt. 2 Cwt. CASKS 1lb & 1/2 Packages

CARBOLIC POWDER (PINK) in TINS 6d & 1/6

CARBOLIC SOAP No 1 & No 2

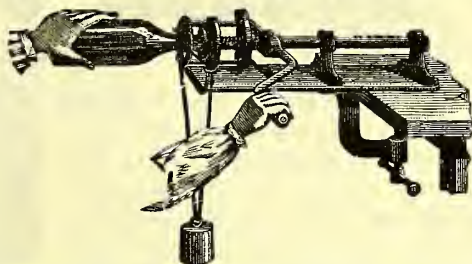
CARBOLIC FLUID in 6d & 1/6 STOPPED BOTTLES

CARBOLIC & GLYCERINE SOAP in 1/4 lb. TABS

FREE FROM POISON
AGREEABLE IN SMELL**THE GOVERNMENT SANITARY CO.**TO BE HAD FROM ALL
WHOLESALE DRUGGISTS

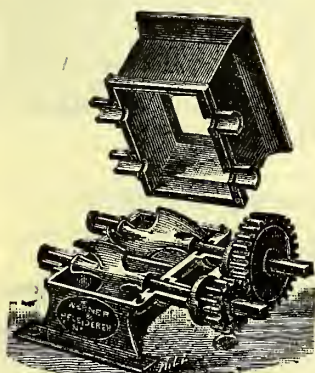
NEW CAPSULING MACHINE

The only Machine
which leaves no crease
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Capsule.



Can be fixed to any
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A single pull of the lever
is sufficient
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Size 3, Type I, for 1-lb. Mass.

THE "UNIVERSAL" KNEADING AND MIXING MACHINE FOR PILL MASS MAKING,

ALSO FOR
Horse Balls, Tooth Pastes, Ointments, Soaps, Powders, and for
general Mixing and Incorporating.

REPLACES WITH ADVANTAGE ALL OTHER APPLIANCES FOR THESE PURPOSES.

Made in various sizes, to do from $\frac{1}{2}$ lb. up to 1 ton at a time.

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GOODALL'S PATENT GRINDING & LEVIGATING MACHINES.

"These machines have for many years proved most serviceable on a large and small scale for Grinding, Levigating, and Mixing Powders, Pill Masses, Paints, &c." Amongst the articles which are readily ground by it may be mentioned Ginger, Seeds, Salts of all kinds, Cream of Tartar, Sugar, Cocoa, Pepper, Spice, Jalap, Rhubarb, Gums, Aloes, Barks, &c.; and for mixing or kneading Lozenges, Pill Masses, Glaziers' Putty, Bread, Biscuits, &c.

ILLUSTRATED PRICE LIST, with full particulars, sent free.

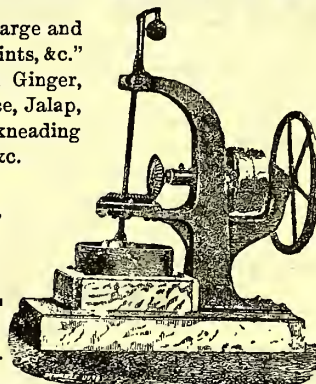
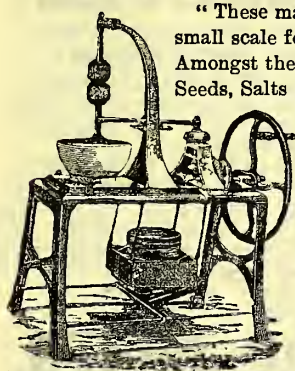
Prices from £8 10s. to £60.

E. F. GOODALL, Duffield, near DERBY.

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Agent—Z. CARTWRIGHT.



TO CHEMISTS AND DRUGGISTS.

AGENTS WANTED FOR THE SALE OF CLARK'S PATENT

"SYPHON"

(REGISTERED TITLE)

HYGIENIC CONDENSING GAS HEATING STOVES.

NO FLUE REQUIRED. ARE FREE FROM SMELL OR SMOKE.

All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.

FOR USE IN HOSPITALS, SICK CHAMBERS, BEDROOMS, HALLS, CONSERVATORIES, CHURCHES, SCHOOLS, ETC.

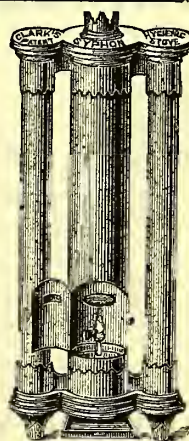
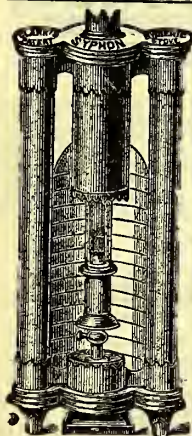
Specially suitable for patients suffering from Bronchial affections, as a moist atmosphere is obtainable when required.

FOR TERMS, PARTICULARS, AND PRICES, APPLY TO

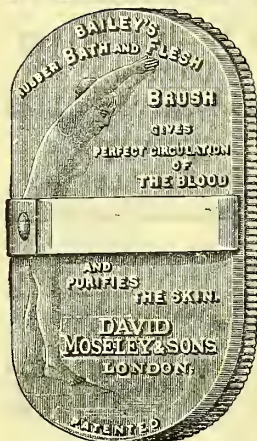
S. CLARK & CO., Patentees & Makers, Syphon Works, Park St., Islington, LONDON, N.

Telegraphic Address:—"SYPHON STOVES LONDON."

Wholesale Agents:—Messrs. MAW, SON & THOMPSON, Aldersgate Street, London, E.C.



BAILEY'S RUBBER BRUSHES.

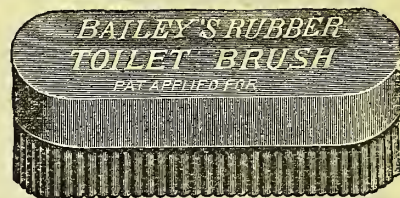


Our Bath and Flesh Brushes have been so well received by the trade, and have met with such ready sale, that it is unnecessary for us to say anything in praise of them here. We shall continue to make them of the very best quality of rubber obtainable, and, as we are advertising them largely, we have every confidence that they will continue to sell well.

PRICE

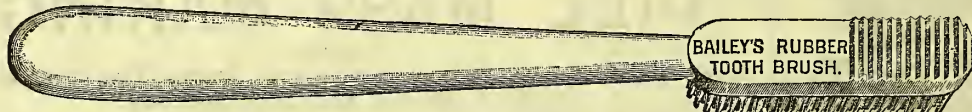
(in neat metal cases and with wood handles),
£2 2s. per dozen.

CLEAN HANDS.



Nothing has ever been invented that will so thoroughly cleanse and whiten the hands as our rubber brushes. Used with soap and water they will remove all kinds of stains without injuring the most delicate skin. They are made of the best Pará Rubber, and will last for years.

Price 1s., 2s., and 2s. 2d. each retail, or 8s., 17s., and 18s. per dozen.



We are just now introducing our tooth brushes. They are made in two sizes, of the best rubber, and are certain to give satisfaction. For cleaning artificial teeth they have no equal. Our prices are 6s. and 6s. 6d. per dozen. Samples at the dozen prices will be sent to any chemist who may wish to see what the goods are like. The brushes will speak for themselves.

PRICE LISTS, AIR GOODS, WATER BOTTLES, SPONGE BAGS, ELASTIC BANDAGES, &c., UPON APPLICATION.

DAVID MOSELEY & SONS, { 14 Aldermanbury Ave., LONDON, E.C.; Ardwick, MANCHESTER;
MANUFACTURERS 57 Miller Street, GLASGOW; BRUSSELS and PARIS.

FACTS SPEAK FOR THEMSELVES!

Results of a voting recently held in the pages of the *British and Colonial Druggist*, as to the most popular makers of the various articles sold by Chemists, reveal the following indisputable facts under the heading of **Menthol Cones**:-

Votes for—

Hockin, Wilson & Co.	65
Christy & Co.	63
Maw	28
Castle Brand	5
Total	161

Votes for—

Shirley's

A1 Brand 644

So that out of 805 votes, **SHIRLEY'S BRAND** obtained **80 per cent.**, whereas all other brands put together obtained but 20 per cent., or comparing each brand separately,

SHIRLEY'S obtained—

Nearly 10 times as many votes as	Hockin, Wilson & Co.'s.
Over 10 " " "	Christy & Co.'s.
" 23 " " "	Maw's.
" 128 " " "	Castle Brand.

THE REASON IS SIMPLE.

Every endeavour has always been made to assist the retailer in selling

SHIRLEY'S A1 BRAND MENTHOL CONES,

By giving away Show Cases, Dummy Cones, Handbills, &c., the latest in this way being "**THE LITTLE CRIER.**"



This Elegant Biscuit-China Figure, an Ornament to any Shop,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL,

Or two if 40/- Order is Placed.

The following special parcels have been arranged to suit all classes of trade:-

Parcel 1, 25/- 4 doz. 2d., 1 doz. 3d., 2 doz. 3d., 3 doz. 4d., 2 doz. 6d.	Parcel 5, 40/- 4 doz. 2d., 2 doz. 3d., 3 doz. 3d., 5 doz. 4d., 4 doz. 6d.
Parcel 2, 25/- 4 doz. 6d., 2 doz. 4d., 1 doz. 1s.	Parcel 6, 40/- 5 doz. 6d., 3 doz. 4d., 2 doz. 1s.
Parcel 3, 25/- 3 doz. 3d., 2 doz. 1s., 1 doz. 4d.	Parcel 7, 40/- 4 doz. 6d., 4 doz. 4d., 1 doz. 9d., 2 doz. 1s.
Parcel 4, 25/- 1 doz. 9d., 2 doz. 1s., 1 doz. 1s. 6d.	Parcel 8, 40/- 4 doz. 1s., 2 doz. 9d., 3 doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 80 per cent. to the retailer on his outlay.

1d., 2d. and 3d. MENTHOL CONES for those who are obliged to sell cheap shapes.

No. 110v. 1d. Vase shape, 3 doz. on a card. 7/6 gross.	No. 114. 2d. Varnished Pedestal shape, 3 doz. on card. 16/ gross.	No. 115. 3d. Varnished Draughtsman, 2 doz. on card. 20/ gross.
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A1 COCAINE MENTHOL TOOTHACHE TUBE.

Sells splendidly; 12 on a card, 3/6 dozen.

SHIRLEY'S

20/ CASE OF SMELLING BOTTLES.

Order one of these cases and you will not regret it. The case is lined with maroon velvet, and has a mirror back. The goods can be got at from the counter, as the case opens from the back. You can rely on a good assortment of bottles being sent you.

ARTHUR W. SHIRLEY, 30 PATERNOSTER SQ., LONDON, E.C.,
And 11, 12, and 13 ROSE STREET, NEWGATE STREET.

S. MAW, SON & THOMPSON'S
WHITE ROSE TOOTH PASTE.

WARRANTED TO KEEP IN ANY CLIMATE.

In Square Earthenware Boxes, Gilt Burnt-in Labels, 12s. per dozen.

S. MAW, SON & THOMPSON'S
CHERRY TOOTH PASTE,

WARRANTED TO KEEP IN ANY CLIMATE.

In Round Earthenware Boxes, Burnt-in Labels, 3s. 9d. and 7s. 0d. per dozen.

S. MAW, SON & THOMPSON'S
AROMATIC TOOTH PASTE.

WARRANTED TO KEEP IN ANY CLIMATE.

In Square Earthenware Boxes, Burnt-in Labels, 10s. 6d. per dozen.

S. MAW, SON & THOMPSON'S
ARECA TOOTH PASTE.

WARRANTED TO KEEP IN ANY CLIMATE.

In Round Earthenware Boxes, Burnt-in Labels, 3s. 9d. and 7s. 0d. per dozen.

S. MAW, SON & THOMPSON'S
CAMPHORATED TOOTH PASTE

WARRANTED TO KEEP IN ANY CLIMATE.

In Round Earthenware Boxes, Burnt-in Labels, 3s. 6d. and 6s. 6d. per dozen.

S. MAW, SON & THOMPSON, LONDON.

£10 REWARD will be paid for information relative to fraudulent Imitators, who represent that they have bought my Recipe, or that their Goods are of my Manufacture. Such Reward to be paid on conviction.

FERGUSON'S BALM

GENUINE.

The best preparation for the Hands and Complexion, and the Infalible cure for Chaps and Roughness of the Skin.
In Red Cases, 1/ size, 9/ dozen; 2/6 size, 22/6 dozen.

CAUTION TO BUYERS.

In consequence of the numerous imitations I have abandoned the Black Cases as used by me when in Leeds. The genuine is now enclosed in Red Cases only. Some of the imitators go so far as to say that they have purchased my Recipe. Such assertions are utterly untrue.

Order Ferguson's Balm, Genuine, Red Cases, take no other. For display of my goods in the window I am prepared to pay. Terms on application to

W. K. FERGUSON, Ph. Chemist,
TOTTENHAM, LONDON, N.

THE NURSERY, THE SICK ROOM, THE TOILET.



THE ARIEL POWDER PUFF.

(MARY WEDLAKE'S PATENT.)

IS a New Invention by which the Powder is contained in the Puff, and from which it is distributed in such a manner as to secure an even dispersion wherever directed. The Ariel Powder Puff never touches the skin, and, therefore, risk from contagion is impossible.

It may be carried in the pocket, always ready for use.

R. FARRAR, House Surgeon, St. Bartholomew's Hospital, writes:—"It is simple, ingenious, and effective."

Dr. G. E. YARROW, City of London Lying-in Hospital, writes:—"It possesses distinct advantages over the old form, amongst the most important of which is, that by its use powder is delivered on parts which are with difficulty reached by the ordinary puff."

Price 8s. and 11s. 6d. per dozen.

Of all Wholesale Houses, and of the Patentee direct.

M. WEDLAKE, 8 Berkley Rd., Regent's Park, London.

The Original Arnicated Corn and Bunion Plasters.

ESTABLISHED
A.D.
1846.

Please see that YOUNG's goods are supplied, as there are many worthless imitations.

HENRY YOUNG, Manufacturer, LONDON.



Established over 25 Years.
Buyers are respectfully solicited to compare with other Manufacturers.
GASOGENES, SYPHONS, FEEDING BOTTLES, AND ALL KINDS OF BOTTLES
CHEAPER THAN EVER.

Price for Black-fitted Feeding Bottles for quantity, 3/6s. per gross, packed in one dozen cardboard boxes.

Prices can be had on application. Special quotations will be given for quantities.
Seltzogenes, 3-pint Nickel Plated, 7/6 each.
" 5 " " 11/6 "
Syphons, 15/6, 19/6, 21/6 per doz.; 1/1 Nickel Plated, 3/ per doz. extra.

Telegraphic Address, "ASSORTED LONDON."

JULES LANG & CO.
16 Hatton Garden, London, E.C.
25 Rue Notre Dame de Nazareth, Paris.



A LOVELY BATH and TOILET WATER

Obtained by using **PASTA MACK.**

GOLD MEDAL, Hygienic Exhibition, Ostend, 1888



This entirely new and Unrivalled Health-giving preparation **SOFTENS the WATER** instantly imparts **A MOST DELICIOUS ODOUR**, and Beautifies the Complexion in an extraordinary way.
See the Trade Mark on every box.

The Queen says:—"Pasta Mack is made in small tablets, which are pleasantly scented, and when placed in water soon dissolve, and impart a violet-like perfume to the water and the atmosphere."
Sole Manufacturer and Inventor, H. MACK, Ulm a/D. Export from all wholesale houses. Wholesale Agents, OSBORNE, GARRETT & CO., London, W

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/, 1/6, & 3/6; Wholesale, 7/12/, & 22/6 per doz.

This much-admired Perfume (first introduced by the late Joseph Okell) may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Sole Consignee—**THOMAS WEST, 59 and 61 Chester Road, Stretford, Lancashire.**

Special Agents—**B. G. LENNON & CO., London, and Port Elizabeth Cape Town, and East London, South Africa.**

IMMENSE SALE.

SOLD EVERYWHERE.

WOODS' ARECA NUT TOOTH PASTE,

As used and recommended by Madame Marie Rose, the Prima Donna.

PRICE, 6d. and 1s. per Pot.

CAUTION.—SEE "WOODS, PLYMOUTH," ON EACH POT.

PURE OTTO OF ROSE, SPECIALITY OF SHIPKOFF & CO.

DISTILLERS AND EXPORTERS,

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Agent for Great Britain—**G. P. BAKER, 19 Ivy Lane, LONDON, E.C.**

THE OTTO OF ROSE which this house distills and exports is known above all by the absolute purity of its quality and the unexcelled sweetness and strength of its odour. It is guaranteed to be the finest essence produced in the famous Rose Valley of Bulgaria.

"BUBBLES."

This artistic SHOWCARD, measuring $21\frac{1}{2}$ in. by 30 in.,
the *chef-d'œuvre* of

SIR JOHN E. MILLAIS, B.T. R.A.

produced at a cost of

£20,000,

is now ready for delivery, and a copy will be supplied FREE
and Carriage Paid with orders of £5 AND UPWARDS, con-
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This Showcard (*of which a duplicate copy cannot be supplied*) is
a fac-simile reproduction of the original, purchased for £2,200.

A. & F. PEARS.

Depots:

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"Pineotas"

THE IMPROVED NATURAL DISINFECTANT.

A Powerful Extract from the Pine. Non-poisonous, most agreeable in smell, quite safe in use. These Goods are got up in the best possible style, and form most attractive and saleable articles.

PINEOTAS DISINFECTING POWDER.—A White Powder, £8 per ton. In Bags or Casks, 1 cwt. and upwards, 10s. cwt.; in hand-some large decorated Tins, to Retail at 1s. each, 4s. 6d. per doz.; ditto, ditto, double size, to Retail at 1s. 6d. each, 8s. per doz.; and ½-lb. and 1-lb. Packets.

PINEOTAS DISINFECTING FLUID (Miscible with water).—1s. Bottles, 6s. 6d. per doz., or 3s. 6d. per gallon.

PINEOTAS CRUDE FLUID.—1s. Bottles, 6s. per doz., or 3s. 6d. per gallon.

PINEOTAS DISINFECTING OIL (A Sherry Color).—1s. Bottles, 6s. 6d. per doz., or 3s. 6d. per gallon.

[1]

Also **SOAPS** (Toilet and Household). Makers of Carbolic Powder, Acid, Crystals, Fluid, &c.

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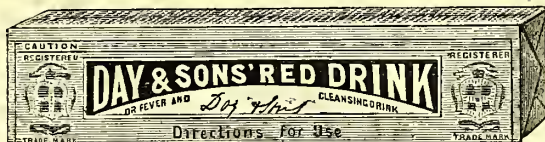
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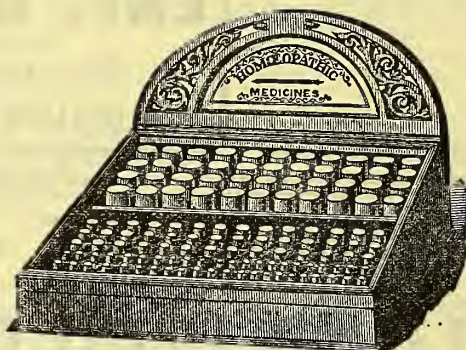
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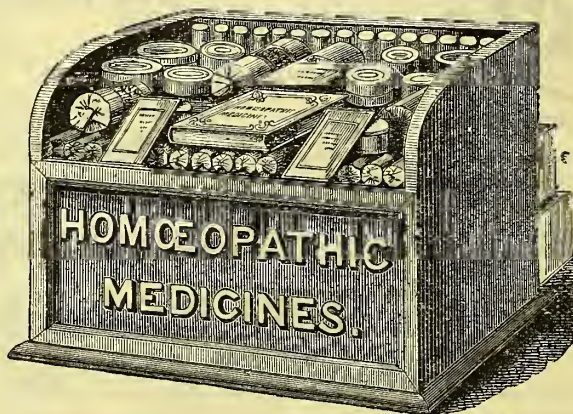
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|                   | No. 1          | 2    | 3    | 4   | 5   | 6 |
|-------------------|----------------|------|------|-----|-----|---|
| Gents' ... ..     | per dozen 10/6 | 12/6 | 14/6 | 17/ | 23/ | — |
| Ladies' ... ..    | " 7/6          | 9/6  | 11/6 | 14/ | 20/ | — |
| Children's ... .. | "              | "    | "    | 6/  | "   | " |

## 325 FELT, SCARLET, OR WHITE.

|                   | No. 1 | 2    | 3    | 4    | 5   | 6   |
|-------------------|-------|------|------|------|-----|-----|
| Gents' ... ..     | 10/   | 11/6 | 13/6 | 16/  | 21/ | 27/ |
| Ladies' ... ..    | 7/    | 9/   | 11/  | 13/6 | 19/ | 22/ |
| Children's ... .. | "     | "    | "    | 5/   | "   | "   |

Sizes of above—No. 1, 9 × 10 in.; No. 2, 9½ × 11 in.; No. 3, 10½ × 12 in.; No. 4, 12 × 14 in.; No. 5, 13 × 15 in.  
No. 6, 14 × 16 in.

|                                                  | No. 1 | 2   | 3   | 4    | 5   | 6   |
|--------------------------------------------------|-------|-----|-----|------|-----|-----|
| 326 "DREADNOUGHT," felt, covering chest and back | 16/6  | 22/ | 27/ | 33/  | 44/ | 50/ |
| Children's ... ..                                | "     | "   | "   | 12/6 | "   | "   |

326A "DREADNOUGHT," chamois and flannel, per doz., No. 1, 18/; No. 2, 24/; No. 3, 30/; No. 4, 36/; No. 5, 48/6; No. 6, 55/.

326B "WAISTCOAT PATTERN," chamois and flannel, per doz., No. 1, 23/; No. 2, 31/6; No. 3, 40/; No. 4, 49/6; No. 5, 61/; No. 6, 71/.

326C "WAISTCOAT PATTERN," felt, scarlet and white, per doz., No. 1, 20/; No. 2, 28/6; No. 3, 36/; No. 4, 44/; No. 5, 54/6; No. 6, 67/.

326D "CUIRASS," chamois and flannel, per doz., No. 1, 26/6; No. 2, 33/; No. 3, 39/6; No. 4, 47/6; No. 5, 59/6; No. 6, 72/.

327 "CUIRASS," felt, reaching from neck to hips, front and back, and fastening with laces and eyelets, five sizes, per doz., No. 1, 24/; No. 2, 30/; No. 3, 36/; No. 4, 43/; No. 5, 54/; No. 6, 66/.

(Sizes of "Cuirass"—No. 1, 11½ × 9½ in.; No. 2, 13 × 11 in.; No. 3, 16 × 11½ in.; No. 4, 17 × 13 in.; No. 5, 18 × 14 in.; No. 6, 18 × 17½ in.)

327A CUIRASS JACKETS, with half sleeves, buttoning down front, made of perforated chamois leather and porous scarlet flannel, in four sizes, each, 32 × 18 in., 6/6; 34 × 18½ in., 7/6; 37 × 20½ in., 8/6; 39 × 21 in., 9/6.

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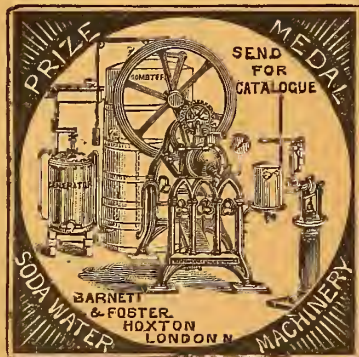
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